Address
ON
APPLIANCES USED IN BIOLOGICAL INVESTIGATION.

Delivered at the opening of the Biological Conferences in connexion with the Loan Exhibition of Scientific Instruments, South Kensington.

BY J. BURDON SANDERSON, M.D., LL.D, F.R.S.,
CHAIRMAN.

IT having been made part of the duty of the chairman of each section of this exhibition to deliver an opening address, it became necessary for me to select a subject. I have had little difficulty in doing this. I propose to attempt to give you an account of some of the instruments of research which you have already seen in the adjoining room, selecting for description and illustration those which are of the simplest construction, and at the same time serve to exemplify the most important and generally employed methods of investigation. In attempting to carry out this intention my scope will be far from ambitious. In addressing you I will take it for granted, for the moment, that none of the distinguished physiologists whom I see before me are present, and will make it my aim to explain to those who have no special knowledge of that branch of natural science which deals with the phenomena of the *life* of plants and animals, and which we therefore call biology, some of the appliances which are of the greatest value in the study of those phenomena.

You are aware that the Committee, in order to render these conferences as useful as possible, have thought it desirable that we should devote our attention chiefly to those subjects of which the instruments contributed afford the fullest illustrations. These subjects are: first, the methods of measuring and registering the movements and other vital phenomena of plants and animals; secondly, the methods of investigating the eye as an optical instrument; and, thirdly, the methods of preparing the tissues of plants and animals for microscopical examination.

Of these several subjects it is proposed that we should concern ourselves to-day chiefly with the first. I shall, therefore, occupy your attention with an account of some of the simplest methods of physiological measurement, and particularly of the methods of measuring the time occupied in the phenomena of life, in the hope that what I tell you may serve as an introduction to the more complicated descriptions which will be given by Professor Donders, M. Marey, and other eminent men, of the elaborate and beautiful instruments which they have contributed to the collection.

I will commence by making the statement, which may perhaps seem to some persons strange, that the study of plant and animal life is entirely an affair of measurement. I will endeavour to offer to you grounds for thinking that it is so, and must be so.

To begin with, it is the character of the scientific study of nature, as contrasted with that vague contemplation of natural objects which many persons imagine to be the business of the naturalist, that it consists in bringing the unknown into relation with the known. Whatever may be the object of our study, whether it be a country, a race, a language, a plant, or an animal, the process by which we come to know it is throughout a process of comparison—a process in which we compare the object of study in respect of such of its features as interest us, with some known standard. And the completeness of our knowledge is to be judged of, first, by the certainty of the standard which has been assumed by us to be true, and, secondly, by the accuracy of our method of comparison and the care used by us in applying it.

Now "comparison with a standard" is only another expression for "measurement"; and in biological research, I repeat, accurate comparison with standards is quite as essential to the value of results as it is in physics or chemistry. Those who have attended the conferences relating to these subjects have learnt how much of the work of the physical investigator is of this nature. From his, our work differs only in this respect, that we do not, as he does, seek out and determine the value of our own standards, but accept as such those well-ascertained certainties of nature which he has already measured out for us. In many cases we do not even concern ourselves in knowing how our standards are obtained, being content to know that they have received the stamp of acceptance in the more exact sciences on which we are constantly dependent for guidance.

I will now endeavour to illustrate my proposition by examples:—

The first objects which strike the eye on entering the room are the large collection of microscopes. You will say, Surely the microscope cannot be regarded as an instrument of measurement. I answer, In so far as it is an instrument of research, and not a mere pastime, it is so. All real microscopical work is matter of measurement. Let us take as an example one of the simplest and best known of microscopical objects—a coloured blood-disc. What I see is a mere circular outline. But I know that that outline represents a lenticular disc of transparent elastic material. All that these words convey has been learnt by methods of measurement. Proceeding from its form to its attributes, I can, by a still more direct application of the method, determine from the microscopical examination of the smallest quantity of blood, even of a drop, the proportion of blood-corpuscles, and consequently, by approximation, the percentage of hæmoglobin and of iron which it contains. As this is a recently discovered method, and one which possesses great practical value in its applicability to medicine, and can be illustrated by showing you the instruments, I will refer to it as my first example. I think I may take it for granted that everyone present is aware that blood is a fluid mass in which solid particles—the corpuscles already mentioned—are suspended. These corpuscles exist in such enormous numbers that in a cubic millimeter (i.e., in the bulk of a pin-head) there are about five millions of them. Even those who are not physiologists will readily understand that it is a matter of the greatest importance to determine in what proportion these little particles exist in human blood at any given time. It is of importance not merely to the physiologist, who knows that the corpuscles are the agents by which oxygen is conveyed from the external air to the living protoplasm out of which our tissues are built up, but still more to the pathologist, who, in a number of cases, recognises in the destruction of these coloured discs one of the most serious results to ordinary health. How can it be known, in any individual case, whether the number of coloured discs circulating in the blood-stream is below or above the normal standard? The essence of the method consists in mixing a measured (but very minute) quantity of blood to be investigated with a much larger quantity (250 times its bulk) of another liquid which is without action on the blood-corpuscles, and introducing a layer of the mixture between two horizontal and parallel plates of glass which are at a measured distance from each other. If now a cube, measuring a fifth of a millimeter, is, so to speak, cut out of the stratum, it is evident that it will correspond to about a thirty-thousandth of a cubic millimeter. Consequently, if a census is taken of the number of corpuscles such a cube contains, it would amount to 166. Now, though, at first sight, it might seem impossible to make such an enumeration, it can in practice be carried out with more than sufficient accuracy, especially if the mean result of several countings is taken.

Let me now leave the microscopes and microscopical apparatus, of which the excellences will be fully explained to you by others, and draw your attention to other instruments. You will find, if you look through the room or through the catalogue, that they are all more or less instruments of measurement. Thus, we have instruments for determining the weight or bulk of the animal body or of its parts, others for measuring growth—particularly the growth of plants, others for measuring the various results of muscular action, and others for investigating the electrical phenomena of plant and animal life.

Numerous as are the forms of apparatus of which we have here examples, they are but few as compared with the

number which must be actually used by the biologist, for those only are here represented which are specially biological. For many purposes the biologist has recourse to the methods, and consequently to the tools, which are to be found ready to his hand in the physical and chemical laboratory. We use, for example, the balances, the galvanometers, the polariscopes, with which the physicist provides us, and do not call them biological instruments, although we biologists are constantly using them. The only instruments which we can thus designate are those which have been either entirely devised for physiological purposes, or have been so modified for such purposes as to be in some sort new instruments. I would take, as an instance of this, the kymograph of Prof. Fick. It is essentially a Bourdon's manometer, to which such a form has been given as to adapt it, not for its more usual purpose—that of a steam-gauge—but for the measurement and registration of the fine variations of the pressure of the blood against the internal surface of the arteries. Many other examples might be given of the same kind, so that if we were to transfer from the biological department every instrument in respect of which it could be shown that it was identical in principle with some instrument ordinarily employed in physical research, we should have very little indeed to show you.

Even if it were possible within the limits of a short address to give you an account of the various instruments of measurement contained in the collection, it would be far from desirable; for many of them will be explained to you, as I have already said, by those to whose ingenuity and scientific knowledge they owe their existence. I shall therefore confine myself to the description of one or two familiar and well-known methods, which I shall select rather because they can be easily explained, and because they admit of some degree of experimental illustration; and with this view will endeavour to exhibit to you their applicability to phenomena which relate to the human body, and not merely to those observed in plants or animals. There are two sorts of measurement so applicable, and which I can readily exemplify—namely, measurement of time and measurement of volume, or rather of changes of volume, both of which yield results of importance and interest.

The simplest of all cases of nervous action is that in which a muscle is thrown into contraction when influenced by a change having its seat in a distant part—i.e., in one of the central organs of the nervous system—in a motor centre, this motor centre being awakened to activity by an impression received by it from outside. This process, which is called reflex action, and has been recognised by physiologists, from a very early period, as a characteristic of animal life, may evidently, if we place before our minds what occurs *in the centre itself*, be described as consisting of three successive stages. Of these, the first is fitly designated that of excitation—wakening, and the third that of discharge; while, during the intervening period, the condition of the centre may be regarded as one of preparation for action, for, having been acted on by the stimulus, it is, as it were, preparing to discharge itself.

The point that I wish to be borne in mind is that each of these stages occupies time, and that in each instance this time admits of measurement, so that of a number of nervous processes, all of which appear to our unaided appreciation instantaneous—"as quick as thought"—some are found, when submitted to the test of measurement, to differ very remarkably from others. Thus, for example, if we confine our attention for the moment to the simplest reflexes, we shall find that, whereas the time occupied in the transmission of the wakening influence from the surface of the body *to* the centre is exceedingly short, and that occupied in its discharge *from* the centre to the muscle is also exceedingly short, that during which the centre is occupied, so to speak, in preparing itself for action is of *relatively* long duration, although to us it appears instantaneous.

The simplest measurement is that of the third stage in the process, that of the conveyance of the discharge from the centre to the muscle. This measurement may be accomplished with the greatest exactitude in the motor nerves of those animals in which the vital properties are retained for long after death, and particularly in those of the frog. You will find several forms of apparatus in the collection specially adapted for this purpose. As, however, I propose to-day to give instances in which the human body only is used, I will not describe these instruments, all of which are included under the term "myograph."

In man the rate at which a message is transmitted along a nerve has been determined by Helmholtz as 110 feet per second. The way in which we can arrive at the result is easily explained. If you place the half-closed hand, with its ulnar side resting on the table, and the thumb supported on a horizontal lever above it, it is evident that if, by voluntary effort or otherwise, a contraction of the muscle is determined, by which the thumb is brought towards the index-finger, the moment at which that takes place will be indicated by the descent of the lever. Normally this contraction occurs only when it is determined by the will, or in consequence of the excitaion of some subordinate motor centre; but I can counterfeit that action by exciting the nerve by which the muscle is supplied at some distant part of its course, electrically, the effect of which, so far as concerns the muscle, will be the same as if it contracted voluntarily. It happens that the nerve which supplies the adductor muscle of the thumb comes in its course very near to the surface—viz., at the elbow. I can, therefore, at any moment, by causing an induction shock to flash through the ulnar nerve at the elbow, produce the desired muscular action. The moment at which this occurs is not the moment at which the muscle contracts; it precedes it by an extremely short but yet measurable interval of time.

Let us, before proceeding farther, agree to call the first act, that by which the induction shock is sent through the muscles, the *signal;* the second—viz., the contraction of the muscle, the *event*. In the case before us the signal is given by the closing of a voltaic circuit. If the lever on which the thumb acts is so arranged that when pulled upon it breaks the same circuit, then we have the two acts of which the true difference is required indicated by the duration of the current, so that if that duration can be measured it gives us all that we want. Now there are two methods of measuring the duration of a voltaic current, both of which are very commonly employed in physiology. One may be called the graphical, the other the electrical. The principle of the graphical method is this:—Having a sheet of paper which moves horizontally at a uniform rate by clockwork (say one metre per second), if I can by any mechanism make a mark upon that paper at the moment at which the current begins, and another when it ends, I shall find that the two marks are separated from each other by a horizontal interval, the length of which corresponds to the duration of the current. Thus, if the current has lasted one-hundredth of a second, it is certain the interval will measure one-hundredth of a metre, or one centimetre. But the record will not be correct unless the mechanism employed be of such a nature that there is either absolutely no loss of time in making either mark, or the loss is exactly equal in the two cases. Now it is easy to secure these conditions. The simplest contrivances for the purpose are those in which both signal and event are indicated by the motions of a soft iron plate, which is supported by a spring over an electro-magnet in such a way that the spring and the magnet act upon it in opposite directions. Thus, in the apparatus on the table, which is much used for a variety of purposes connected with time-measurement, you have a good illustration of this principle. With its aid I shall be able to make an experiment so as to exemplify the method. You will see in a moment, from the diagram which exhibits the arrangement, that the *signal* by which the person experimented on is acted upon, and the *event*—i.e., the muscular movement which results—must coincide, the one with the opening, the other with the closing, of a voltaic circuit in which the electro-magnet is included. Consequently there must be mechanical or electrical arrangements of such a nature that on the one hand A can promptly give his signal and close the circuit by the same act, while B, on the other, can acknowledge the signal and open the circuit also by the same act.

Let us now proceed to the experiment. We will compare two kinds of signals—a sound signal, and one acting through the nerves of common sensation. For both purposes I will be myself the subject of experiment. The signal will be given from the other end of the table, in the one case by a bell which will be rung by the same current which marks the time on the recording cylinder; in the other, by an induction-shock, which I will receive on the tip of my tongue. In the two instances the process is similar but not identical.

In both the centre is the same, and the motor nerves by which it discharges itself are the same, but the afferent nerves, and particularly the terminal apparatus on which the signal directly acts, are different.

Let me now direct attention to the results. In either case the result is a horizontal straight line written on the cylinder, of which the end and beginning are indicated by the marks made by the lever. How do we translate this straight line into time? It must be done by comparison with an invariable standard. The time-value of the line depends on the rate of movement, and the only way by which we can determine this rate with accuracy is by comparison with an invariable standard. You have before you a tuning-fork which, as you hear, is kept in vibration by a powerful electro-magnet, to which it stands in the same relation as the hammer of an ordinary induction apparatus stands to its electro-magnet, interrupting the current in exactly the same way. The fork vibrates 250 times per second. Each vibration therefore lasts four-thousandths of a second. If, therefore, I allow the fork to trace its vibrations simultaneously on the cylinder, immediately below the line I want to measure, it is obvious that I shall be able, without the slightest difficulty, to determine the time occupied in drawing the line. Employing the apparatus you now see, I am able to measure with accuracy to one five-hundredth of a second.

Some one will now perhaps be disposed to ask—What is the use of all this? Want of time renders it impossible to answer this question fully. I must content myself with a single example. It is now well known that by exciting certain spots on the surface of the brain definite movements of the limbs of animals can be determined. Of these movements two explanations have been given. On the one hand, it is said that the effects are due to the excitation of the *centres* from which proceed the motor nerves from which the muscles thrown into action derive their supply; while, on the other, it is supposed that a complicated series of changes originate in the brain in consequence of the excitation—more or less analogous to a psychical process—of which the muscular contraction is the final event. Of these two alternatives we are able to exclude the first by time-measurement. If the process is one of excitation of the origins of motor nerves, the time occupied ought not to exceed, say, a fortieth of a second. The actual interval between excitation (signal) and the result (event), is ten times as long. We are therefore sure that we have not to do with a mere transmission of excitation along motor channels.

I have now, in conclusion, to speak of the other kind of measurement to which I previously referred, the measurement of changes of form of organs in relation to the time occupied.

For this purpose the biologist uses graphic apparatus of the most various kinds, of which you will have some beautiful examples brought before you to-day. For the most part these have for their purpose the transference of a rhythmical to-and-fro vital movement to a lever of some kind, the motions of which, by virtue of the mechanical arrangements by which it is brought into relation with the organ or limb, imitate its movements exactly. I cannot refer to better examples than those which are to be seen in the Donders and Marey collection. But it has always been recognised that it would be of great importance to obtain direct records of changes of volume of organs or organisms independently of changes of form. We have in the collection two instances in which methods for this purpose have been applied with great success.

In the apparatus devised by Professor Hering for recording the respiratory movements (No. 3769) the animal to be observed is placed in an air-tight chamber possessing two openings. Of these, one communicates (air-tight) with the respiratory cavity, the other with a manometer. This being the case, it is obvious that, the volume of the chamber being known, the variations of bulk of the animal due to respiration are accurately expressed by the variations of pressure.

Another application of a similar principle (with the exception that the closed chamber is filled with water, not with air) is one of such great importance that I shall venture to occupy a little more time in describing it to you.

The instrument in question is called the plethysmograph. Its purpose is to measure and register the changes of volume which a limb or any other living organ undergoes in varying conditions of the circulation. It has been long known that living parts vary in bulk according to the quantity of blood which they contain; but here, as in almost every other subject in physiology, all the precise knowledge we possess has been gained within a comparatively recent period. I bring it before you because the discovery of an exact method which has now been accomplished by Dr. Mosso, of Turin, is of the highest practical importance.

The arm is enclosed in a cylinder of glass entirely filled with water, the closure of the mouth of the cylinder being effected by a perforated diaphragm of india-rubber. The cavity of the cylinder communicates, by a tube, with a manometer of a peculiar kind, in the construction of which the perfection of the apparatus is most apparent. It can be readily understood by the model. Imagine in the first instance a beaker filled with distilled water, in which a test-tube containing the same liquid floats vertically. Then let us suppose that the end of the tube leading from the cylinder is bent downwards so as to dip into the liquid contained in the test-tube, so that this liquid is continuous by means of the contents of the connecting tube with the liquid which fills the cylinder. This being the case, it is obvious that the test-tube will become heavier and descend whenever the arm enlarges, and *vice versâ*. Dr. Mosso has found that by properly adjusting the relative densities of the two liquids (in the beaker and test-tube), it is possible to render the gauge so extremely sensitive that the slightest fluctuations in bulk of the limb are faithfully indicated by the vertical movements of the test-tube.

In order to convert the apparatus just described into a recording instrument, all that is necessary is to write the vertical movements of the test-tube on a surface moving by clockwork. This has been successfully accomplished by Dr. Mosso, and I will now ask your attention for a moment to some of the results.

It can be shown, first of all, not only that variation of bulk of an organ is a much finer test of the state of its circulation than was previously supposed, but that the capillary circulation itself is affected by varying conditions of other functions, with a readiness which, to say the least, is very surprising. I will refer to one or two instances only. Probably everyone is aware that the circulation is much interfered with by the emotions, and that many persons blush for very inadequate reasons. Dr. Mosso has shown not only that emotions so slight that we are entirely unconscious of them produce effects on the circulation of the most definite character, but that even purely intellectual acts, such, for example, as the act of calculating, are attended with a marked diminution of the blood-stream in the superficial parts of our bodies. I will not occupy your time with describing Dr. Mosso's investigations, as I hope that some further account of them will be given by Mr. Gaskell. I am glad, however, in the absence of Dr. Mosso, to have had the opportunity of bringing his apparatus under your notice, because, in my judgment, the introduction of his method constitutes an important step towards bringing within our reach, in our investigations of the varying conditions of the circulation in man, a degree of exactitude which has been hitherto attainable only in experiments on animals.

THE MALVERN RURAL HOSPITAL.—The committee of the Malvern Rural Hospital, considering that they had not sufficient control over the medical staff, have held a special meeting, rescinded the old rules, and passed new, which, as regards the medical staff, are to the following effect:—The medical staff to consist of a consulting physician and surgeon and two other surgeons, one of whom is to be surgeon-superintendent. The staff to be appointed by the committee, upon such terms and with such duties as they may think fit. The surgeon-superintendent to visit the hospital twice a day, oftener if necessary, and see that the surgical instruments, &c., are always ready for use. No capital operation (one involving danger) to be performed without consulting the whole of the medical staff. The staff to be at liberty to invite the attendance of qualified medical practitioners, subject to regulations to be made by the committee.

MRS. "MINA JURY," whose thefts from the residences of medical men, under pretence of engaging them to attend patients, have been a matter of notoriety, has been committed for trial.

A Clinical Lecture ON SEPTICÆMIA.

Delivered Jan. 26th, 1876,

BY S. MESSENGER BRADLEY, F.R.C.S.,
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GENTLEMEN,—In June last year I admitted a man into the Manchester Royal Infirmary with hydrocele of the tunica vaginalis, which had resisted ordinary means of cure. The day after admission I tapped him once more, when, for the first time, I discovered a second sac, encysted hydrocele of the cord, on the same side. This I also tapped, and injected both sacs with tincture of iodine. This little operation was followed by suppuration, and on the third day by grave constitutional disturbance; temperature rising to 103°, and the pulse to 130; countenance anxious; tongue dry and furred; much restlessness, profuse sweatings, and rigors.

The sac of the tunica vaginalis was freely laid open and half a pint of fetid pus evacuated. The general symptoms were for a short time relieved; but the following day diarrhœa ensued, the temperature again rose, and the patient died delirious six days after the paracentesis had been performed. There was no evidence of thrombosis, embolism, or visceral abscesses; in a word, the man died of septicæmia.

A few months after this, Walter Searson, curator of the Owens College Medical School, pricked his thumb while dissecting a tiger for the museum, and two days afterwards began to suffer pain at the seat of injury. On the fourth day he called to see me, when I found a small quantity of thin fluid discharging at the root of the thumb-nail. The lymphatics were perceptibly affected, the skin was cool, the tongue dry, pulse 100; but perhaps the most noticeable symptom was intense depression of spirits. I freely incised the thumb and sent him home to bed: this was Aug. 22nd. From this day his general condition grew worse, up to the 26th, when an ill-defined, or rather an undefined, abscess appeared in the cellular tissue of the arm. On being opened several ounces of pus were discharged, which lay loosely in the tissues unconfined by any limiting membrane. Each day fresh abscesses of the same diffluent character appeared on the chest, abdomen, legs and feet. He was very restless, and passed gradually from a condition of prostration into one of muttering delirium, which ended in death on September 11th, twenty-four days after the reception of the poison. The secretion of urine was almost entirely suppressed for the twenty-four hours preceding death, and the breathing was both rapid and difficult, auscultation revealing extensive moist crepitation of both lungs. There was no post-mortem, but this was clearly a case of pyæmia.

At the same time that the man with the hydrocele lay dying of septicæmia, a youth with a compound fracture of his leg was brought into the same ward. He was a healthy lad, and there was nothing in the case to cause alarm; indeed, it was one of those cases of which, with proper surroundings, we may safely predicate a sure and speedy recovery. After lying, however, in juxtaposition to the septicæmic patient, the young fellow fell a victim to the same disease, and it was only after two months of great peril that he contrived to drift through the disease into a slow convalescence.

These three cases may serve as types: the first arising *de novo*, the septic material being manufactured by the patient himself—a consequence only possible in certain conditions of the system. This is the class of case met with in private practice. The second case illustrates the production of the disease by direct inoculation from without; while the third affords an illustration of the mode in which the malady is conveyed in hospital from patient to patient.

I draw no distinction between septicæmia and pyæmia, believing that if there is a distinction, it is a distinction without a difference. Both are caused by organic matter (septic germs) entering the general system: in the first and third cases entering probably by the veins; in the second by the lymphatics. In the first case the poison killed without visceral lesion; in the second it gave rise to thrombosis in the veins, which, being detached, became the nuclei of suppurations scattered throughout the cellular tissue generally and the various viscera. But clearly these are only unimportant varieties of one pathological condition, which we may conveniently term septicæmia.* Now in studying this condition of septicæmia, we shall learn something of its nature and how to prevent it by turning to another variety of the same disease—I mean that form of puerperal fever which depends for its production upon puerperal peritonitis. As in ordinary pyæmia, cases of puerperal fever occur sporadically, so to speak—spring up away from a hospital, in patients surrounded by everything which we should consider antagonistic to its development. In these cases, however, we can nearly always trace the presence of some putrefying organic matter—a bit of placenta, &c.,—just as we can in isolated instances of pyæmia; as in ordinary pyæmia, too, puerperal peritonitis is clearly contagious, conveyed with fatal certainty from patient to patient by the hands of doctor or midwife.

We can, however, advance still further towards a conclusion as to the real character of the poison and as to the mode in which it must be destroyed. The experiments of Chauveau and Burdon Sanderson demonstrate that if a septic fluid capable of producing toxæmia when injected into the veins of a living animal be strained through a porcelain filter, the liquor so filtered may now be injected with impunity, whereas the solid residue remaining on the filter retains in full force all the septic properties of the original fluid matter. This residue is shown to entirely consist of bacteria. Whether these bacteria be the very incarnation of the poison, or merely act as beasts of burden for it, is a question which exercises the minds of curious men, but need not here detain us, having established the fact that bacteria are essential to the production of septicæmia.

We have learned a good deal of late about these organisms. We know, amongst other things concerning them, that they are heavier than air—e.g., in Tyndall's recent experiments upon the non-septic properties of optically pure air it is shown that three days suffice for gravitation to deposit all the floating germs upon the bottom of the little boxes which he uses; and that the poison of septicæmia is likewise of a comparatively heavy nature is evident in the clinical history of puerperal fever, which teaches us that the spread of the disease may always be traced to human go-betweens, and is never conveyed from patient to patient by mere diffusion through the air. It is of course possible that, in a crowded hospital, poison-germs may be wafted from the wound of a septicæmic patient and alight upon the open sore of a neighbouring case, when it will, in turn, give rise to the disease; but the whole history of septicæmia differs markedly from diseases which, in their wide and rapid spread, seem to depend upon the diffusion of septic gases.

Assuming, then, the point to be conceded that septicæmia does not depend on gaseous diffusion, and coupling the facts that it never occurs without putrefying organic matter and that putrefaction requires the presence of living germs, we are not postulating too much in affirming that the destruction of the germs must render the spread of the disease impossible. To what practical issue does this lead us? You all know, gentlemen, what just odium attaches to the surgeon who, after one clear case of puerperal fever, allows himself to become the medium of its conveyance to another victim; not only moral pains and penalties are his, but the arm of the law deals with him sharply. Now I confess it seems inconsistent to be so careful in one case and so careless in the other. All authorities admit the contagiousness of pyæmia; nearly all agree that it is carried only by actual contact from case to case; and yet we see, every day, cases

* I am quite aware that Drs. Moxon, Goodhart, and others, have examined the blood of patients dying of pyæmia without finding bacteria. I should imagine in most cases of pyæmia without wounds communicating with the air—when, for example, the disease commences in a necrosis—there would be few bacteria present; but in many respects this clearly differs from the infective form of the disease, where the evident origin of the evil is putrefying organic matter. I conceive that in all cases of septicæmia the constitutional condition of the patient must play a large part; even in such a disease as ringworm, where the producing organism is, comparatively to the minute bacteria, gigantic, the patient himself greatly influences the development of the fungus. As easily try to grow corn in water as ringworm in certain human soils, and it is so probably with the poison of septicæmia.

of pyæmia remaining in wards crowded with open wounds (wounds with open vessels ready to absorb everything, good or bad), and all these cases under the care of the same surgeon, house-surgeon, and nurses. Surely it is not asking too much to insist upon a separate ward, where any case of septicæmia should be transferred, and which ward should be looked after by an entirely separate staff of attendants.

But, gentlemen, it is not enough to isolate our cases; we must purify our wards; and this subject naturally divides itself into two:—1st. What test have we, besides that of the ill-doing of our patients, that our wards are impure? 2nd. What are the best means of purifying them? Unfortunately chemistry, to which we naturally turn, yields no satisfactory reply as to the detection of organic impurities. But it does give us an answer, though in a somewhat roundabout way; for, having discovered that the quantity of carbonic acid in the air is constant, being almost exactly the same in a London court and at the summit of Mont Blanc, and that any excess in the carbonic acid is an indication of organic impurities in the air,—in this way chemistry does enable us to get at some precise results. Let us, then, adopt this method of investigation in examining the condition of our own hospital. In accordance with my request, Mr. Thomas Harrison, F.C.S., a very competent authority, on January 14th of this year, examined the air of certain wards in the hospital with the following results:

Estimate of the quantity of CO_2 in 10,000 volumes of air.

Average quantity of CO_2 in 10,000 volumes of Manchester air, 4.	
President ward	18
Humphry Nicholl ward ...	8
Passage adjoining...	4

I shall not further allude to the condition of the President ward than to say that, be the cause what it may, such a condition of air as is here revealed is an unfit atmosphere for sick people. What I wish more particularly to draw your attention to is the condition of Humphry Nichol ward. Owing to a recent epidemic of erysipelas, this ward had been cleared out a month before the analysis was made, and both windows and ventilators kept open ever since; yet we find that the quantity of carbonic acid is exactly double that in the adjoining passage. If you ask me how I explain this remarkable fact, I can only answer that I imagine it to be caused by hordes of bacteria which are for ever discharging carbonic acid into the air like so many little Christians. This supposition, which I quite admit seems somewhat fanciful, receives support from another experiment performed by Mr. Harrison, who, on Jan. 16th, examined the air of the ashpit of his back yard. On this occasion he found 14·08 parts of carbonic acid in 10,000 volumes of air. Having ascertained so much, he discharged a quantity of ozone for thirty seconds, and then found only 10·2 parts of carbonic acid. Now, as ozone has no effect upon carbonic acid, this result is only explicable on the theory that ozone arrests the fresh formation of carbonic acid. We know that ozone destroys the life of bacteria; we know also that bacteria emit carbonic acid: hence it seems a fair inference that the extraordinary quantity of carbonic acid is due to the presence of aerial hosts of these minute organisms.

That bacteria do exist in the air of our hospital is quite certain. In 1868 Mr. Lund examined the air of the hospital, and found bacteria in abundance. Dr. Dreschfeld, at my request, lately exposed some papers moistened with water and glycerine to the air of some of the hospital wards, and found bacteria, though, he informs me, in very small numbers. I supplemented his experiments by repeating those which Mr. Lund had made, and found that the distilled water with which the flasks which I used were filled became turbid with bacteria in a few days.

Now, gentlemen, bearing in mind the fact that ozone destroys organic matter, and remembering that it is organic matter which gives rise to the putrefactive changes of septicæmia, let us inquire how we can practically bring this agent to bear. I find that the air of Manchester is absolutely devoid of this natural antiseptic, but it fortunately happens that nothing is easier than to manufacture ozone, and this, too, quite on a grand scale. With a Rumkopf coil, such as this, and one of these generators of Tisley's, you could fill the largest ward in this hospital with ozone in a few hours. Now that I put the battery in action, so as to electrify the oxygen as it passes through the tube, you see the gas in its changed state coming off in large quantities, blackening this prepared paper, and changing this solution of starch and iodide of potassium into a deep and beautiful blue. Without venturing to affirm that every antiseptic acts simply as an oxidising agent, we may safely affirm that no antiseptic is so potent as nascent oxygen or ozone; hence it seems to me that when an epidemic of septicæmia has vitiated the air of our wards we should resort to this agent for purification.

These experiments, to which I have before alluded, may be taken as proving that the air of the hospital is impure; yet, if we examine our statistics, we find that they compare favourably with those of most other hospitals. The best cases to take are probably amputations, as they are numerous enough to afford reliable grounds for comparison, and do not depend for their result on any special skill in the operator. Professor Simpson, whose *hospital* statistics were never impugned, stated that "all amputations of all the four limbs in eleven of the largest general hospitals of the country gave a mortality of 41·6 per cent., or nearly 1 in 2·4." Erichsen found that 80 consecutive cases of amputations at University College Hospital, from July 1st, 1870, to December 1st, 1873, gave a mortality of 26·2 per cent. Of 307 amputations performed by himself, 79, or 25 per cent., died. At our own hospital, from 1868 to 1873, 304 amputations, whose results are tabulated, were performed, excluding all amputations of the hand and lower third of forearm and of the foot and ankle. Of these 77 died, giving a mortality of 25 per cent.; if, however, we include the previously excluded amputations, we reduce the mortality from 25 to 20 per cent., being 2 per cent. below that of University College Hospital, and 2 per cent. above that of St. Bartholomew's, where the mortality of late years has been reduced to 18 per cent. But, gentlemen, although by cleanliness and care we have reduced the mortality to a percentage which compares favourably with that of the best metropolitan hospitals, we should not rest satisfied with such a result when we are acquainted with the fact that in a bygone generation, and with ruder means at his command, Guthrie, during the Peninsular war, lost but one case in twelve of all his amputations, being a mortality of only 8 per cent. We should not, indeed, justly rest satisfied until we have achieved an equal success with his, especially when we know the only cause for the great disparity lies in the comparative purity of the air. At the debate on pyæmia at the Clinical Society last year, Spencer Wells and Dr. Gordon made statements bearing upon this question, the one referring to the hospitals at Malta, the other to the Parisian ambulances during the Franco-Prussian war; their statements proved that the mortality was ever in direct proportion to the quality and quantity of the air.

As I have said, gentlemen, there is no ozone in the air of our city, but it is abundantly present in the outskirts, and these papers, which are so deeply coloured by ozone, received the tinge by being exposed for a few hours in that of Oxford-road, where the Infirmary Committee urge the erection of the future hospital.

To what conclusions, gentlemen, do these thoughts lead us? Let me briefly restate the case by way of answer. I have endeavoured to show that pyæmia, septicæmia, and puerperal peritonitis (all varieties of one disease, which may be generically termed septicæmia) are associated with the development of organic germs, "bacteria," which act either as the carriers of the poison or as the poison itself; that septicæmia may be, and is, carried in a hospital from one patient to another by surgeon or nurse; that all cases of septicæmia occurring in a hospital should be at once removed and effectually isolated from contact with the other cases; that as ozone destroys the vitality of bacteria, ozone should be employed to purify our wards when septicæmia has appeared in them; that this may be readily effected in a few hours by means of a small battery and Tisley's ozone generator; that the air in the Manchester Infirmary is impure, and therefore deleterious, but that, notwithstanding this, our death-rate, in consequence probably of the great attention paid to cleanliness, compares favourably with that of other hospitals; that, however, when we recall the achievements of Guthrie in the Peninsular war of sixty years ago, we must consider this mortality really excessive, and should constantly urge the necessity of our hospital being built on better principles and in a purer air.

NOTES ON UTERINE PATHOLOGY.

BY GRAILY HEWITT, M.D., F.R.C.P.

I.

THE system of uterine pathology which was put forward in the third edition of my work "On Diseases of Women" (1872) was embodied in the following propositions:—"(*a*) Patients suffering from symptoms of uterine inflammation (or, more properly, from symptoms referable to the uterus) are almost universally found to be affected with flexion or alterations in the shape of the uterus of easily recognised character, but varying in degree. (*b*) The change in the form and shape of the uterus is frequently brought about in consequence of the tissues of the uterus being previously in a state of unusual softness, or what may be often correctly designated as chronic inflammation. (*c*) The flexion once produced is not only liable to perpetuate itself, so to speak, but continues to act incessantly as the cause of the chronic inflammation present." (p. 2.)

Many of those who have criticised my views on the subject have imputed to me opinions which I have never held. The views to which I have committed myself were concisely represented in the above-quoted passage. To that expression of opinion I still adhere. This conclusion was not expressed hurriedly, but deliberately, and was based on an accumulation of facts and observations made publicly, recorded publicly, and the accuracy of which has never been arraigned. Experience before and since that period has only confirmed me in the above opinion, and clinical observation—the final court of appeal in such a matter—has more and more convinced me of the substantial accuracy of this view of uterine pathology.

Uterine pathologists have been reproached for the apparently opposing views they hold on the subject, but those conversant with the details of gynæcological practice are aware that generalisation in regard to this subject is one beset with difficulties. Moreover, systems have their "day," and the adherents of one system are often not ready to admit that a better system is possible.

It is natural enough that those who have been long accustomed to regard "chronic inflammation" of the uterus as the chief clinical feature in the cases coming under their notice, and who have been in the habit of attempting to relieve their patients, and frequently successfully, by measures calculated to lessen the "chronic inflammation," should be reluctant to admit that there is something extremely important underlying this "chronic inflammation," which they have either altogether ignored or treated as a secondary and unimportant condition.

The opposers of the new doctrine may be classed under two heads:—1. Those who know little as to the actual frequency of alterations of shape of the uterus as a clinical fact. These comprise at this date comparatively few. 2. Those who admit the frequency with which alterations of shape of the uterus occur, but who contend that these alterations of shape are never of any consequence *unless associated with* "chronic inflammation," or, as some prefer to call it, "congestion." The authors of repute whose opinions are concisely represented in this second category are numerous. They represent a kind of compromise between the old and the new view of the subject, and as it is not rarely the case in human affairs that compromises are acceptable to public opinion, this compromise is largely accepted.

Of late a knowledge of the existence and frequency of occurrence of flexion of the uterus has been largely extending; many new investigators have entered the field, and numberless contributions have been published within the last four or five years, evidencing the importance with which these alterations of the uterus are regarded by the rising generation of gynæcologists. It will not be necessary, therefore, to deal with those opponents classed under the first head. The compromise theory, as I would term it, is practically the one admitting of discussion of an advantageous kind.

In the first place I would remark that we have here to deal with (*a*) facts admitted (*b*) opinions controverted.

a. The facts admitted are that in many cases, a large proportion of actual cases indeed, the patient is found to have (1) a distorted condition of the uterus, and (2) a congested, or inflamed, or softened (these terms are convertible, or sufficiently so for the sake of argument) sometimes a hardened condition of the uterus.

b. One, and the most important, of the opinions controverted refers to the *connexion which subsists* between the two things.

It may be possible to reconcile to a certain extent the apparent confliction of opinion on this matter.

The discomfort the patient experiences is due to what? Here is the point where a difference of opinion begins. The opponents of the new theory, some of them at least, boldly state that flexion by itself produces no symptoms, and that when it is associated with "chronic inflammation, congestion, softening," &c., it is the latter condition which gives rise to the discomfort.

Unquestionably the "other condition" of the uterus, call it by what name you will, is largely responsible for the pain, discomfort, &c., in those cases where it and the flexion are associated. So far there is a certain amount of agreement. I have never disputed the importance of this "other condition" of the uterus; indeed, I attach an extreme degree of importance to it. But the relation which subsists between flexion and this "other condition" (I use this phrase, "other condition," because it is troublesome and calculated to mislead to perpetually employ terms which imply some particular ideas as to the nature of this "other condition") is the point on which we differ very materially.

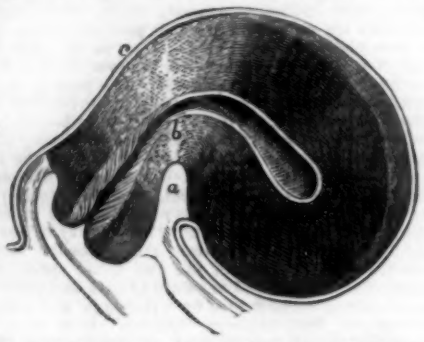
So far as I am aware, no comprehensive attempt has been made by the upholders of the compromise theory to explain how and why it is that the uterus becomes affected with the "other condition." I do not know that any attempt at all has been made. The only substantial criticism which has been made on the theory which I have put forward as to its cause is to the effect that patients are relieved by treating the congestion alone, and without paying particular attention to the deformity of the uterus. Further, it is contended by some that relieving the congestion cures the deformity. But admitting the fact that the application of leeches, for instance, to the os uteri relieves the patient of pain, and admitting further that unloading the uterine vascular system of its superfluous blood in some cases facilitates its return to the normal shape, these admissions are very far from invalidating the truth of the propositions above quoted as embodying my views.

My own practice has been to deal with cases, where the two things are associated, on the principle that the change of shape is the principal cause of the other alterations in the uterus; and I am able to affirm that this principle is one which is practically and almost always successful in relieving patients of their suffering. When I am told, therefore, that another method—the continuous depleting treatment, as it may be termed—is efficacious, my reply is, "Possibly; but my method is more rational, goes more completely to the root of the matter, and it succeeds."

I have insisted on the clinical importance of the flexion as compared with the other condition, because I consider it to be the *fons et origo mali*, so far as the suffering is concerned. The facts supporting this view are conclusive to my mind. They are briefly these: that exertion and bodily exercise, even bodily position, which tends in any way, for the moment, to aggravate and intensify the existing flexion, gives rise to increase of pain. Nay, many of these sufferers *only* suffer when taking these exercises, or when so sitting or so standing as to bring forces into action calculated to still further strain and bend the uterus, and thereby intensify the other secondary effects.

The "mechanical" theory of uterine pathology, which I have endeavoured to develop in the third edition of my work, does not consist, as seems to have been imagined by some of my critics, in the application of instruments in all cases. The word "mechanical" is used in another sense altogether, and is intended to imply the mechanical origin of the uterine disorder. The mechanical theory of uterine pathology is a common sense explanation of what is found to occur in the uterus when the patient suffers from symptoms referable to it. The essence of it is that the circulation in the uterus is necessarily impaired, obstructed, and interfered with when the organ is constricted at its middle portion, which is the case in patients affected with

flexion of the uterus. There ensues a congestion of both extremities of the uterus, the occurrence of which is a necessary result of compression of the vessels and tissues at the centre, and which I some few years ago described in



The woodcut represents diagrammatically congestion (strangulation) of the uterus consequent on acute bending of the organ, the parts deeply shaded representing those parts of the uterus swollen and unduly loaded with blood.

its most intense degree as a "strangulation" of the uterus. Klob, in his work on the Pathology of the Female Sexual Organs, speaks of this effect. Dr. Thomas, of New York, whose views on the subject of uterine pathology are, in many essential particulars, identical with my own, also recognises this effect of flexion of the uterus in inducing congestion of the fundus and os uteri. Dr. John Williams, in a recent valuable paper, admits this mechanical result of flexion in producing congestion of the organ.

When flexion occurs, then, there results "mechanically" a congestion as above described. When the flexion is intensified the congestion is increased; when it is removed or lessened the congestion is relieved. To unbend the uterus is to permit the circulation again to resume its normal course and its natural freedom. The flexion thus acts (as indicated in the third of the three propositions above quoted) incessantly in keeping up the so-called "inflammation."

We come next to the *causation of the flexion*. Here again my statements have been much misrepresented or misunderstood. Without pretending at this moment to answer this question exhaustively, it may be said to originate in one of two ways: either, as indicated in the second of my original propositions, "in consequence of the tissues of the uterus being previously in a state of unusual softness, or what may be often correctly designated as chronic inflammation"; or, as I have stated in another place, in consequence of a sudden fall, or shake, or blow.

This view involves, it will be observed, an admission as to the share played in the etiology of flexion by certain other conjoined conditions of the uterus itself, which is very explicit and well defined; this part of the question has yet to be more fully developed. It is, however, quite certain that in many cases the quite healthy uterus becomes suddenly affected with flexion by accident, or force applied to it in some way. And it must be evident that these two classes of cases will have each a different history. Here again may be pointed out certain points on which agreement really holds good. Both sides admit the concurrence of changes in the uterus (so-called inflammation, congestion, softness, &c.) and flexion of the organ, and also the occasional occurrence of acute flexion from the action of an external mechanical force.

Now I would inquire of those who are opposed to the theory I uphold, how they will explain the occurrence of congestion, chronic inflammation, &c., as secondary phenomena of acute traumatic flexion otherwise than in the manner I have endeavoured to explain it. If they admit, as inferentially seems to be the case, that a decided flexion may suddenly occur and be followed by the events referred to, how are these latter explainable in any other way? It appears to me likely that on reflection this point would be conceded, and that concerning this class of cases there would not remain much difference of opinion.

The real difficulty develops itself when we come to endeavour to explain those cases where the flexion is one of some standing, its mode of origin not decidedly and pointedly indicated by the previous history, and conjoined therewith are found various alterations of the uterine tissues, also evidently of some standing.

I have thus far endeavoured, as fairly and accurately as I could, to reach the source of a part of the disagreement which exists.

It may be added to what has been stated, and as a convenient way of putting the matter concisely:—

1. There are conditions of the tissues of the uterus (congestion, chronic inflammation, softening, hardening, &c.) which may be present without flexion or change of *shape* of the uterus.

2. There are like conditions *coexisting with flexion* of the organ.

3. The tissues of the uterus are, with some few qualifications, in a like condition in the two cases.

4. The "other condition" may have existed prior to the occurrence of the flexion.

5. The "other condition" may be produced, originated, and maintained by the presence of the flexion.

The further elucidation of the important questions still matters of controversy requires, in my opinion, careful consideration. I shall hope to carry the matter further in subsequent communications.

ON THE

BEHAVIOUR OF CARBOLISED CATGUT INSERTED AMONG LIVING TISSUES.*

BY WM. JAS. FLEMING, M.B.,

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THE absence of definite knowledge of what becomes of carbolised catgut when introduced among the living tissues, recently shown by the speakers at a debate in a distinguished London scientific Society, suggested to me the expediency of trying to clear up the question by experiment.

Two ideas seem now to hold sway in the profession upon the subject. Some consider that the catgut is absorbed—that is, dissolved, taken up, and carried away, without leaving any trace behind; in the same way as a soluble crystalline substance introduced into the tissues. Others maintain that it is organised, converted into tissue, and becomes a living active part of the body. In a modified form of this latter I conceive my experiments show the truth to lie.

The mode of experimentation adopted passed through various phases. At first I simply inserted carbolised catgut with a needle below the skin of a dog's back, putting fresh pieces in new places at definite intervals. A month after the first piece had been introduced the dog was killed, and no trace of any of them could be found except in two places, where abscesses had formed around portions which had only been in a few days. This was the only instance in all my experiments in which this complication ensued, and was probably due to the use of a dirty needle.

This complete disappearance of the catgut rendered it necessary to adopt some plan of marking its exact position, and for this external means, such as silver sutures put in the skin, nitrate of silver, &c., were found inefficient. Under these circumstances, I adopted the plan of attaching silver wire to the catgut by twisting it firmly round it in a spiral of about an inch and a half long. This plan answered perfectly until I came to cut the sections, when the wire interfered, and, if pulled out, disturbed the very piece of tissue to be investigated. I now substitute for the wire carbolised silk, applied much in the same way. The advantages of this are that it can be closely applied to the catgut, is little altered in the tissues, seems to set up no irritation, and can easily be cut with the razor. Having then taken a piece of carefully prepared thick catgut, about six inches long, and attached the silk over about an inch and a half in the centre, I thread the gut into a sharp aneurism needle, push it well into the tissues, and bring the

* A paper read before the Glasgow Medico-Chirurgical Society.

point out, say three inches, from the place of puncture. The gut is caught, the needle freed and withdrawn, and the part of the catgut bearing the silk being adjusted so as to occupy the middle of the track, the ends are cut short, and by putting the skin on the stretch they slip below it, thus making the whole piece subcutaneous. Of course the needle, surface of skin, &c., are previously rendered antiseptic.

In this manner, then, I have performed about twenty experiments upon dogs and rabbits, latterly with the addition that I killed the animal by bleeding, and injected the abdominal aorta with two per cent. Bruke's soluble Prussian blue. I then cut out the pieces of catgut with some of the tissue in which they were imbedded, hardened them in spirit, or froze them, and made sections in the usual way.

The results of these experiments show that a gradual softening takes place from without in, the catgut breaking down and becoming infiltrated with cells, probably leucocytes. This part of the process takes from five days to about twenty, varying with the specimen of catgut, the tissue amongst which it is situated, and the age and vitality of the animal. Next the pultaceous mass into which it has been converted begins to metamorphose, and is soon permeated with blood channels, and ultimately may be described as a cast of the catgut, in a kind of granulation tissue freely supplied with bloodvessels, which in many of my sections are very fully injected.

If, then, we admit these conclusions, we can easily account for the different results obtained by the use of catgut in different hands. We see that it is in reality merely a temporary ligature, because when in the softened stage we cannot consider it to have any constricting effect.

Whether, then, this temporary condition lasts long enough to produce embolic occlusion of the vessels depends upon the sample of catgut and the vitality of the patient.

In conclusion, my experiments seem to demonstrate that an aseptic, dead, foreign, animal body may under appropriate conditions become, by a process of softening, absorption, and re-deposition, changed into or replaced by a living, vascular, and comparatively highly organised, animal structure.

THE PRIMARY CAUSES OF SEA-SCURVY.

BY HARRY LEACH, M.R.C.P.L.,

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IT has been a subject of much annoyance to all interested in the hygienic condition of our merchant vessels that scurvy during the last eight or nine months has reappeared with renewed vigour among the crews of some ten or twelve long-voyage ships. Batches of typical cases so familiar to the medical officers of the *Dreadnought* twenty years ago have again been seen at Greenwich, and I may safely state that British ships have brought home, since the commencement of the year, at least fifty cases of the disease, not taking into account about as large a number landed at ports abroad from the same cause. These facts are, in a scientific and also in an official aspect, very humiliating. The Merchant Shipping Act of 1867, some sections of which were specially drawn with a view to the prevention of scurvy, has hitherto been declared, on this score, a great success. But, in consequence of these recent outbreaks, public faith in the existing legislative measures at present carried out is somewhat shaken. The result is of course inevitable, when it is considered that since these so-called antiscorbutic enactments came into operation, the gradual substitution of steam for sailing ships, the opening of the Suez Canal, and the introduction into the export markets of a vast quantity and variety of preserved provisions, are all to be classed as so many powerful agents in the extinction of sea-scurvy. Hence it appears desirable at the present time to recapitulate briefly the direct causes of the disease, leaving the reader to judge whether these causes are, under existing commercial circumstances, preventable or not.

The late Dr. Parkes, whose practical interest in this subject was constant, and whose article in the *British and Foreign Medico-Chirurgical Review*, published in 1848, has never been surpassed, asserted (and, as it appears to me, proved) that absence of vegetable diet was the one constant factor in the production of scurvy. The disease may not—indeed, does not—invariably occur when vegetables are not taken, but it may safely be said that when fresh vegetables are eaten, of good quality and fair in quantity, scurvy does not appear. Many cases are on record in which persons remained free from the disease for months together on an exclusively animal diet, the flesh eaten being, however, fresh and good of its kind and ample in quantity. The predisposing, or secondary, causes of scurvy on board ship are cold and damp clothes and quarters, an inactive life, dirty habits, in all probability bad water, and, of course, pre-existing illness. I do not propose just now to enter at all into the scientific bearings of the question, or again to discuss the potash, phosphoric acid, citric acid, or other theories; but, being firmly convinced that these recent cargoes of scurvy need not have been imported into this country by our own ships, I am anxious to convince the profession and the public that one, or both, of the two direct causes above mentioned would be found to obtain in each and every case if opportunities were afforded for a thorough and complete examination. Dirt, idleness, "scouse," bad water, and "venereal," are all put forward as direct causes of the disease by shipmasters and shipowners, many of the latter never having "voyaged" at all in their own vessels. But dirt, as we all know, is common to very many individuals afloat and ashore, and if all idle people became scorbutic, scurvy would be endemic in every quarter of the globe. "Scouse" is a mixture composed of cook's fat, or slush, biscuit, and water, to which minced salt meat is usually added. I will venture to assert that, in spite of prohibitions from the captain and obstructions from the cook, it is eaten habitually by at least three-fourths of all seamen in long-voyage ships, and, according to scientific evidence, has no specially scorbutic properties, assuming, of course, that the ingredients used are all fairly good of their kind. Bad water—and as may, I think, be added, condensed water—may possibly predispose to scurvy. But this has been often named as an exciting cause, whereas crews of other ships, supplied with the same water from the same place, have returned in good health. Venereal, or, indeed, any other disease, will always predispose to scurvy; but the presence of the former need not, and ought not, to herald the advent of the latter, unless the man is so ill as to be unfit for work at the commencement of the voyage.

As it was considered inexpedient or found impossible in 1867 to alter the scales of diet then, as now, in common use afloat, legislative means were adopted to increase the quantity and ensure the good quality of the lime and lemon juice served out to sailors by Act of Parliament, this juice, fortified by a small percentage of alcohol, being considered, as a natural combination, the best and most convenient antiscorbutic. It is, however, as was pertinently remarked by, I think, Dr. Domett Stone some years ago, but "an antidote for a poisonous diet," and though its administration must, under existing circumstances, continue to be recommended and enforced, it is astonishing to me that shipowners do not so alter their diet scales as to precipitate the entire abolition of these vexatious (and to them sometimes costly) antiscorbutic clauses of the Merchant Shipping Acts. Meanwhile, as long as these clauses (necessitated by the monotony or bad quality of the food provided) are in force, I think it may be honestly maintained that the direct causes of sea-scurvy, as it exists in the present day, are purely preventable, if the authors thereof are not sufficiently punishable.

CONGENITAL LUXATION OF THE CRYSTALLINE LENS.

BY JABEZ HOGG,

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TRAUMATIC luxation of the lens the ophthalmic surgeon is frequently called upon to treat in hospital, and it is observed that accidents of the kind are almost invariably due to blows on the eye; the lens is loosened from its attachments, and drops down behind the pupil, or is forced through it into the anterior chamber, or lodges in a pouch between the sclerotic and conjunctival coats. The patient

may have no recollection of having received an injury of any kind, and luxation is then regarded as of spontaneous origin. It is, however, quite exceptional to meet with a case of spontaneous luxation in infancy. Mr. Bowman, in his "Lectures on the parts concerned in the Operations on the Eye," narrates two or three cases of dislocation of the lens. One in particular is described as "very remarkable, and in some respects unique—a loosening of the suspensory ligament of the lenses of both eyes." The patient is described as being extremely myopic, and as having "a gold ring in his eye," which "enabled him at will to throw it backwards and forwards through the pupil." This was, no doubt, a case of congenital luxation of the lens. Two cases of what may be described as congenital loosening of the crystalline body, possessing points of exceptional interest, have lately come under my care: one a case of double luxation occurring in utero, and the other at the time of birth.

CASE 1.—*Double luxation, with coloboma of choroid inferiorly; probably produced in utero.*—Master C. C——, a boy of ten years of age, residing at Constantinople. The history of the case, as stated by the mother of the boy, was to the effect that about six weeks before her confinement she stumbled and fell down a short flight of stairs, and in pitching forward struck her head violently. A momentary state of unconsciousness followed, but as no visible bruise of any kind was noticed she believed she was not hurt. For many days, however, and even up to the time of her accouchement, she suffered from headache and lumbar pains.

The child, when born, was in every respect well formed, and no suspicion was entertained by the parent or medical man of defective sight until the second or third year, when one eye appeared to be more used than the other, but as no change or malformation could be detected this was attributed to myopia. However, as the boy increased in age, so, apparently, did the defect, and further advice was then obtained, but without any definite result as to the precise nature of the loss of sight. Education has been impeded by the defect; he is decidedly backward for a boy of ten years of age. Now reads ordinary test types with great hesitation and difficulty at about three inches, usually inclining his head to the right, and presenting the book in an oblique direction to the eye.

On all occasions he uses the right eye much more than the left. The following table shows the acuity of vision (S) before and after the instillation of atropine:—

Vision of Left Eye (Snellen's Tests).

	No. of glass.	S. before atropine.	S. after atropine.
Near.	0	0	5½ at 1"
	+ 4½	3½ at 3"	4½ at 1"
Distance.	0	C at 6"*	C at 6"*

* Slit and glass produce no amelioration in sight.

Vision of Right Eye.

	No. of glass.	S. before atropine.	S. after atropine.
Near.	0	5½ at 3"	5½ at 3"
	+ 4	3½ at 3"	3½ at 4"
	+ 4, and slit vertically	3 at 3"	3½ at 4"
	slit alone	5½ at 3"	5½ at 3"
Distance.	0	L at 6"	0
	with slit vertically	+ L at 6"	L at 6"†

† No glass improves S.

A slight tremulous motion behind the pupil is observed as the eye moves from left to right. With the ophthalmoscope this is seen to be due to luxation of the lenses. There is apparently a slight opacity of the periphery of the lenses, and this proved to be due to the position the lenses had assumed. In the quiescent state of the eyes, however, the lenses in this particular do not perfectly correspond, that of the right being seen downwards and outwards, that of the left downwards and inwards. When the head is thrown backwards and upwards distant objects are seen with considerable acuteness.

Mr. Hoyland, who saw Master C—— at Constantinople writes me: "Possibly the ligament of the lenses, the outer side of one, and the inner side of the other, must be in tact, otherwise the lenses would ere this have fallen into the anterior chamber." This view is, he thinks, strengthened by the fact that on one occasion, and when in a position of danger, the "plucky little fellow jumped through a window," and no harm came of the fall, which was considerable, on the other side. This, however, can hardly be so, as the lenses are very mobile. The sight of the left eye is not only more defective than that of the right, but the coloboma is more palpable, the vessels are smaller, and the fundus more anæmic. The boy's general health is good, but the difficulty of seeing places him at a disadvantage in education; he frequently gets into trouble from not seeing objects in their exact places. It is quite probable that the luxation occurred in utero, and at the time of the fall spoken of by the mother towards the termination of her pregnancy.

Mr. Bowman subsequently saw the boy, and he thought operative measures should be resorted to for the relief of the abnormality; he was of opinion, however, that if inflammatory action were to follow, sight might be made worse.

No doubt, if extraction could be successfully effected, convex glasses would permanently improve vision; but this seemed to the mother something like a step in the dark, and she refused her consent.

The prognosis of the case is doubtful, as, by a violent fit of sneezing or coughing, the lenses may at any moment be thrown into the anterior chamber and thus produce mischief or set up destructive inflammation.

CASE 2.—*Luxation of the lens of the right eye, believed to be due to the use of instruments.*—Alfred H——, born March 25th, 1874, at the commencement of the year 1875 was supposed to have some defect of vision. The history given by the mother was to the effect that, labour being both prolonged and anxious, her medical attendant thought it advisable to deliver her with instruments. The blades of the forceps left a bruised depression on the right side of the head. This, in time, entirely disappeared, and nothing more was thought of the circumstance until it was observed that the child had some defect of the right eye.

Although at first the eyes appeared normal, on dilating the pupils with atropine, and examining them more closely with the ophthalmoscope, luxation of the lens of the right eye was perceptible. The lens was lying at the moment with its superior border visible above the margin of the iris, and when the child moved forwards the lens rose. The left eye appeared normal, and the child is perfectly healthy and well developed. The right eyeball is, however, smaller than the left; arrested development is very apparent; but as the luxation produced no inconvenience, I thought it advisable not to attempt its removal.

Bedford-square.

A Mirror OF HOSPITAL PRACTICE, BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum, tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium.

UNIVERSITY COLLEGE HOSPITAL.

CASE OF INTESTINAL OBSTRUCTION; GASTROTOMY; DEATH.

(Under the care of Mr. BERKELEY HILL.)

FOR the notes of the following interesting and remarkable case, and the remarks, we are indebted to Mr. A. P. Gould, surgical registrar.

L. D——, aged ten, was admitted on January 25th, 1876, with the following history:—Patient was in her usual health until January 23rd. At 3 P.M. she carried a child up fifty steps, but appeared quite well after it; at 5 P.M. she had a motion, and immediately afterwards complained of pain in the abdomen and nausea. She would not take any tea. At 7 P.M. she vomited, and the vomiting continued at short intervals until admission on the evening of the 25th. The

vomit was said to have become fæcal for the first time that morning. The pain was severe all this time. Poultices and turpentine stupes were applied to the belly, and on the evening of the 24th an enema was given, which brought away two or three scybala, and, according to the mother's account, a good quantity of blood, enough to deeply stain all the fluid. No motion or flatus passed spontaneously, but there was very distinct gurgling heard by the mother. The child often complained of ineffectual attempts to defecate, and of frequent desire to micturate.

On admission, the child complained of great pain and tenderness in the abdomen, especially on the right side. She vomited stercoraceous matter. The abdominal walls were lax; no swelling could be detected in either groin, or at any of the seats of external hernia. There was no discharge from the rectum, and nothing could be felt on digital examination therein. An enema of two pints of water was administered, which brought away some hardened lumps of fæces and a very small quantity of blood. After this the sickness stopped for four hours; it then returned again. Hot fomentations were applied to the abdomen, and at 9 P.M. ten drops of tincture of opium were given. When seen by Mr. Hill at 10 P.M., the child was calmly asleep, the abdomen was not tense, moving freely in respiration; the pulse was quick, and of fair force. Shortly afterwards the child woke up, and vomited mucous non-stercoraceous fluid copiously. At midnight a second dose of ten drops of tincture of opium was given.

Jan. 26th.—After the second dose of opium the patient slept soundly for six hours, was then sick, and the sickness continued more or less all day. The vomited matter consisted of the milk the patient drank, with greenish bile, but towards evening it became again slightly stercoraceous. At 9 A.M. an examination of the belly gave negative signs. The flaccid abdominal walls permitted the hand to trace the position of the viscera; no tumour could be felt in the course of the great intestine or elsewhere. Pain was referred to the left of the umbilicus, and this part was also tender when handled. The finger in the rectum detected no swelling or unnatural condition. The rectum was empty; no blood was passed. The pulse was of good force, and the abdominal movements were natural. The patient lay indifferently in several positions, and sat up in bed without difficulty. Temperature: 7 A.M., 98·6°; 4 P.M., 99·4°; 7 P.M., 98·6°. Ordered half a teaspoonful of brandy every four hours, and five drops of tincture of opium as might be required; it was given about every three hours.

27th.—The patient has a very pinched aspect. Complains of a good deal of pain round umbilicus, and in right iliac region; not tender. The vomiting, which is not stercoraceous, still continues, occurring about once every half-hour, very scant in quantity, often little more than sputa from the mouth. In the morning she was ordered to be fed with nutrient enemata only; at 4 P.M., these enemata, being instantly dejected, were discontinued, and milk or Brand's essence of meat every half-hour, with half a teaspoonful of brandy every two hours, were substituted. Two grains of calomel and half a grain of opium at once. At 7.30 P.M. eight drops of tincture of opium were given, and repeated twice at intervals of three hours each, after which the patient slept quietly for some hours, and was not sick. Temperature at 10 A.M., 98·8°; 4·30 P.M., 99·2°; 8 P.M., 98·4°. One of the nutrient enemata brought away a little blood.

28th.—Patient is weaker, lies with her knees drawn up, and gives an occasional whining cry; abdomen not tender, a little distended about umbilicus, tympanitic in middle line from xiphoid cartilage to pubes, moderately dull to right of rectus, and dull on the left side from outer border of rectus quite into flank. No tumour can be felt in abdomen, but in right lumbar region a soft mass is felt which gives way under the finger. No fæces, flatus, or blood had passed per anum. One grain of calomel was given at 5 A.M. Vomiting of muddy fluid continued at short intervals all through the day. A hypodermic injection of one-twelfth of a grain of morphia was given at 9 P.M., and repeated twice during the night. Temperature, 11 A.M., 97°; pulse 120, small, weak.

29th.—Patient much weaker, and more exhausted and depressed. Vomiting of mucus and bile still continues. No fæces or flatus or blood from the bowel. Three grains of calomel which were given were vomited at once, and also when tried two hours afterwards. The hypodermic morphia injection was repeated. An enema, containing half an ounce of castor oil and half an ounce of turpentine, was given. It returned, tinged with fæcal matter, and brought away a few small scybala; no blood. Brandy was given every hour, and small quantities of beef-tea at short intervals.

30th.—Dr. Ringer met Mr. Hill in consultation. On examination per rectum they felt a soft round mass pressing on part of rectum. Patient much weaker; vomiting continues, and is again fæcal in character. It was decided to perform gastrotomy.

Operation.—Patient was put under the influence of gas and ether at 2.30 P.M., and Mr. Hill made an incision two and a half inches long in the middle line, extending half way up to the umbilicus. He dissected down to the peritoneum, in which he made a small opening and passed in his finger, but failed to find any constriction; he then enlarged the wound upwards for about an inch. The soft mass previously discovered per rectum proved to be the empty coils of small intestine which had sunk into the pelvis. Dilated intestine was found above, and followed to the umbilicus, where a constricting band was felt over a piece of intestine lying just above the umbilicus. This was brought into view, when it was found to be rather loosely constricting the bowel, but sufficiently to form a distinct furrow across the gut. The band was divided with scissors, and the gut returned into the abdomen. No blood passed into the peritoneal cavity; two small arteries were ligatured in the abdominal wall. The wound was brought together with carbolised silk sutures, and dressed with dry lint and cotton wool. The child slept for a little while after the operation, but then became very restless, screaming out; had a hot skin and flushed face; vomited dark, very offensive fluid several times, and gradually sank and died five hours after the operation.

Autopsy, twenty-one hours after death.—Rigor mortis well marked, emaciation extreme, no distension or retraction of abdomen. No recent peritonitis. Omentum greyish-yellow, congested; old adhesions to abdominal wall. A coil of deep greyish-black shiny intestine was seen to right of middle line about eight inches long, and on lifting it up was seen to be tightly constricted by a firm fibrous bond, which was evidently mesentery, through which the coil had slipped. About six inches above this piece there was a distinct furrow round the dilated intestine, where there were a few flakes of lymph adhering, and a short band with free end, evidently the remainder of the constriction found and divided during the operation. The hernia was about six feet below duodenum. The intestine above the constriction was dilated, moderately congested, smooth; below the hernia contracted and empty, somewhat fastened together by fibrous bands. This and the sigmoid flexure were in the pelvis. All the mesenteric glands were enlarged, some of them were cretaceous. The whole upper surface of liver adherent to diaphragm by old white adhesions; gall-bladder full of black bile. Upper and anterior part of spleen adherent to diaphragm. Lungs congested, no fibrous or calcareous nodules. The base of the right lung generally firmly adherent to the diaphragm; numerous tough adhesions of the right lung to the thorax. The viscera otherwise healthy.

Remarks.—This case is an interesting contribution to our knowledge of intestinal obstruction. The absence of signs strongly indicative of internal strangulation occasioned delay in performing gastrotomy, by which operation alone, the sequel proved, any chance of recovery remained. The diagnosis lay between internal strangulation and obstruction by impaction. Intussusception was negatived by the absence of tumour, the absence of frequent attempts at defecation, and by the non-evacuation of blood per anum during the whole time the patient was in hospital, though it was reported that some had passed before her admission. The comparative mildness of the symptoms for the first three days of the patient's stay in hospital, before which the obstruction had already lasted two days, the slow advent of pain and sickness, coming on immediately after an evacuation of the bowels, *not* immediately after the protrusion through the mesentery of one large knuckle of intestine, and the constriction of another by a cross band of fibres, suggested the probability that the obstruction was due to impaction, and that the severe exertion shortly before the occurrence of the symptoms was merely a coincidence. The possible existence of a strain or rupture

and the absence of tumour were the main evidence in favour of strangulation.

In his clinical remarks on the case, Mr. Hill reminded his auditors of a case which had been in hospital previously, where a young man was suddenly seized with violent pain in the bowels and constant vomiting while performing gymnastic exercises. In this case the vomiting changed in two days from bilious to stercoraceous, and continued copious and frequent for eleven days, until spontaneous diarrhœa set in and restored the patient to health. He mentioned also a case which he had recently seen with Dr. Cornelius, of Canonbury. This was also a young man, who, apparently quite well until the 7th of January, was seized, when getting out of bed, with copious and constant vomiting, with violent dragging pains on the left side of the umbilicus. In spite of assiduous treatment, the vomiting continued every two or three hours, and changed from bilious to stercoraceous. No improvement ensued, and on the 13th of January Mr. Hill was summoned. The patient then had great anxiety of countenance and lay curled on his left side. At the umbilicus there was severe pain and considerable tenderness, the belly was distended and tympanitic throughout, no tumour felt anywhere, and the anus was empty. Nothing whatever had passed the anus since a clyster which had been administered on the 9th January. Vomiting every half-hour, or thereabouts, of fetid stercoraceous matter; tongue small and not dry; thirst. Opium was given every three hours, and hot poultices laid over the belly. Vomiting then ceased for twenty-three hours. It then recurred, but of bilious matter, not stercoraceous. The opium, combined with calomel, was continued for some days, and on the 19th the bowels were moved freely twice a day for several days, after which the patient made a rapid recovery.

In the three cases the history and the absence of positive signs were similar, yet the most severely injured patient was less violently disturbed than the others. She had less pain and less prostration; and the vomit, instead of becoming rapidly stercoraceous and continuing so, was not fæcal for two days, and then only so at intervals. The prostration and weakness, which became marked before death, did not appear until the day before the operation was resorted to.

ST. THOMAS'S HOSPITAL.

CASE OF ILIO-FEMORAL ANEURISM TREATED SUCCESSFULLY BY LIGATURE (WITH CARBOLISED CATGUT) OF THE EXTERNAL ILIAC ARTERY.

(Under the care of Mr. SYDNEY JONES.)

THE following case, for the notes of which we are indebted to Mr. Potter, presents several features of clinical and pathological interest. Firstly, the situation of the disease, although not rare, is by no means common; aneurism of the femoral artery generally occurring nearer the apex of Scarpa's triangle. Secondly, the mode of the application of the catgut ligature was unusual. The advocates of catgut ligatures particularly insist that, as the material is capable of being absorbed, the ligature should be cut short and left in the wound. In this instance, Mr. Jones purposely allowed the ends of the ligature to hang out of the wound to act as a drainage. It is important to note that the two ends came away separately eight days after the operation. At what point the ends of the catgut were detached could not be determined. Lastly, it is remarkable that, although the aneurism was cured, and everything, as far as the limb was concerned, progressed satisfactorily, yet there was no return of pulsation in either the posterior or anterior tibial artery.

Henry H——, a robust labourer, aged thirty, married, was admitted into Edward ward on Sept. 29th, 1875, with a pulsating tumour in the right groin. The man had always had good health, and had lately been employed as an omnibus conductor, and, although subject to rheumatic pains in the larger joints, he had never had rheumatic fever. He had drunk freely of beer (six to seven pints a day) and spirits until his present illness. His father died aged fifty from "breaking a bloodvessel"; his mother living and healthy; two sisters and a brother phthisical. No evidence of aneurism nor gout in family.

About a month previous to admission he noticed a pulsating lump in right groin, the size of a walnut, for which he could not assign any cause. He continued his employment till Sept. 27th, when he consulted Mr. Palmer, in Newbury, who advised him to lie up. This he did, and refrained from stimulants, and took but little food. Two days afterwards he was admitted into the hospital.

On admission the following notes were taken: Dark and somewhat sallow complexion, muscular frame, quiet and satisfied temperament. Superficial arteries are neither rigid nor atheromatous to the touch. Heart sounds not attended with murmur. Temperature normal. An ovoid pulsating tumour can be felt and seen to beat towards the inner side of, and in connexion with, the femoral artery, extending beneath Poupart's ligament, and involving the lower part of the external iliac artery. It is twice the size of a walnut, and beats synchronously with the radial pulse, 65 in the minute. No pain on manipulation. The pulsation of the tumour gives a thrilling sensation to the hand. Aneurismal bruit distinctly heard with stethoscope. The subcutaneous tissue appears to be matted with aneurismal walls.

On Sept. 30th flexion of the leg was employed, the whole limb having been bandaged with flannel and cotton-wool, one-third of a grain of hydrochlorate of morphia given subcutaneously every night. Purge and enema given. Meat diet, with half a pint of porter.

As he complained of pain and numbness of the leg and foot, even when the limb was only semiflexed, and was very restless, Mr. Jones decided upon placing a ligature on the external iliac artery above the aneurism.

Oct. 6th.—An enema having been given beforehand and chloroform administered, an incision five inches long was made parallel to Poupart's ligament, and about an inch above it, commencing one inch internal to anterior superior spine of ilium. The fascia and muscles were divided on a director, and the transversalis fascia exposed; this was then divided. The wound was freed from blood, and pressure was made upon the external iliac artery. This controlled completely pulsation in the aneurism. A carbolised ligature was then placed around the vessel from one and a half to two inches above the aneurismal dilatation, and the ends of the ligature allowed to remain outside the wound to act as a drainage; ligature was followed by entire cessation of pulsation in tumour and femoral artery. Wire sutures used for superficial wound; almond-oil dressing and cotton-wool applied. Leg and thigh enveloped in cotton-wool, and bandaged with flannel in its entire length. Patient half an hour after operation (2.30 P.M.) had subcutaneous injection of one-third of a grain of morphia, which was repeated at 10 P.M.; limb comfortably warm during evening; no pain in groin or elsewhere.

7th.—Absence of sickness after operation. Patient remains quiet, with thigh slightly flexed and raised. Pulse 69, temperature 100·0°, urine 1027, no albumen. Morphia injection every night.

9th.—No pain at wound. No pulsation to be felt in anterior or posterior tibial arteries. Tongue clean. Takes fluid nourishment well. Sutures removed and wound strapped with soap plaster. Almond oil dressing. Temperature 98·5°, pulse 60. Has to-day a little cough, no expectoration. Appears a little jaded.

10th.—Rheumatic pains in shoulder. Pulse 56, temperature 98·7°. Wound appears quite healthy, with marginal blush; discharges a healthy pus; no pain. Strapped and dressed with almond oil. Slight tenderness of abdomen; cough increasing.

12th.—Wound continues to look well; the cicatrix is forming towards middle and outer end. Condition of patient good. No evidence of pulsation in posterior tibial artery. Pulse 66, temperature 99°.

14th.—Respiration easy; no abdominal tenderness nor pain. The two ends of the ligature, which had remained at inner end of wound since operation, have to-day come away separately.

15th.—Slept better than usual. Feels comfortable. At 8 A.M. several clots of dark blood were found which had escaped from wound, amounting to two ounces. Patient states that he had felt the blood running away for a period of three hours. A constant watch is kept upon the case to prevent, if possible, further hæmorrhage. Temperature, evening, 98·9°. The oozing has continued slightly at in-

tervals throughout the day. Lint wrung out in iced water kept in contact with wound. Morphia injection at night as usual.

16th.—Restless night. Temperature 99·2°; pulse 54. Oozing ceased; a little pain in abdomen; tongue clean. 3 P.M.: Temperature 98°. Discharge just tinged with blood.

17th.—Patient appears none the worse from hæmorrhage. Appetite good. Pulse remains full. No pulsation in sac.

19th.—Ice water discontinued; almond oil reapplied. Now allowed solid food. Complains of cough during night, and a distressing sensation across chest. Expectorates mucus. Pain at lower part of abdomen relieved by enema.

22nd.—Progressing favourably. Small amount of healthy discharge from wound. Bronchial râles over posterior part of both lungs; cough increased. Discharge still slightly tinged with blood.

25th.—Bronchitis continues; expectoration more free. Poultices applied to chest. No pulsation perceptible in either tibial arteries of right limb. The greater part of wound has healed up; inner end discharges a healthy pus. Temperature 98·1°; pulse 54. Takes a mixture containing ipecacuanha wine and paregoric.

Nov. 1st.—Allowed to sit up in bed. The discharge, which is small in quantity, is slightly tinged with blood.

6th.—Wound now healed perfectly. Does not have injection at night.

7th.—Bronchitis well; tongue clean and moist.

16th.—Allowed to sit up every day.

Dec. 20th.—Dismissed from hospital, cured.

When patient was discharged there appeared to be no pulsation in either anterior or posterior tibial arteries, in femoral, nor in tumour. He has since resumed his occupation, and suffers no inconvenience.

BRADFORD FEVER HOSPITAL.

CASE OF PURPURA HÆMORRHAGICA.

(Under the care of Dr. REGINALD ALEXANDER.)

CATHERINE W——, aged twenty-six, a domestic servant, was admitted on Feb. 23rd, 1874, at the request of Dr. Bronner, with a history of five weeks' illness previous to admission, during which period she had had attacks of syncope, with great weakness and prostration. She had an extremely anæmic aspect, and on the legs and trunk of the body purpuric petechiæ were visible. There was considerable hæmorrhage from the vagina. The respiration was normal, but accompanied by sighing. The urine was free from albumen. Pulse 120; evening temperature 101·2°; cough, but little expectoration. She was ordered eight ounces of port wine, and perchloride of iron mixture.

Feb. 24th.—Morning: Temperature 100°; pulse 102. Evening: Temperature 101°; pulse 112.

25th.—Morning: Temperature 100·4°; pulse 112. Evening: Temperature 101·4°; pulse 108. Ordered an enema.

26th.—Morning: Temperature 101·2°; pulse 124. Evening: Temperature 101·4°; pulse 120. The hæmorrhage from the vagina has ceased.

27th.—Morning: Temperature 101·2°; pulse 126. Evening: Temperature 102°; pulse 128. The patient is much weaker, but takes very nourishing food well.

28th.—Morning: Temperature 101°; pulse 128. Evening: Temperature 102°; pulse 124.

The patient from this time sank rapidly, and died on the 1st of March.

Autopsy, forty-five hours after death.—Purpuric spots on the body and legs. Upon opening the cavity of the thorax the two layers of the pleura were adherent by bands of lymph. Lungs sodden, and in a state of hypostatic congestion, and, on section, considerable oozing of frothy fluid. No fluid in the pericardium. Heart extensively covered with purpuric spots; a clot of decolorised fibrin in pulmonary artery. Liver pale and friable. Kidneys pale, and on stripping off the capsule kidney-tissue came off with it. Spleen much enlarged, and pale. Internal surface of stomach covered with spots, but none found on the intestines. Uterus and vagina filled with blood-clots. Brain not examined.

Remarks.—It seems to be particularly desirable to publish notes of fatal cases where a post-mortem examination has been obtained, so as to contrast the symptoms during life with the pathological condition of the several organs after death, and by this means our knowledge can be often increased, and our diagnosis tested and corrected. Purpuric petechiæ are often seen in most of the viscera, the membranes of the brain, the pleura, peritoneum, and pericardium, but rarely found on the surface of the heart. There are many domestic servants who exist on tea and a dietary quite insufficient and unfit to maintain nutrition, a normal condition of the blood, and a natural state of the tissues.

Medical Societies.

OBSTETRICAL SOCIETY OF LONDON.

AT the meeting on Wednesday, May 3rd, Dr. Priestley, President, in the chair, Dr. MURRAY exhibited a Flexible Vertebrated Uterine Sound, which could be introduced limp, and, when inserted, by twisting a screw at the end the sound became firm and straightened. Adhesions could thus be detected. There was danger from the ordinary uterine sound passing through the fundus uteri. He only employed it in extreme cases of flexion, and not with a view to raising an adherent fundus.—Dr. HAYES inquired if the uterine sound would pass through a healthy uterus?—Dr. ROUTH stated that we could not tell which was a healthy uterus until we had passed the sound. He had seen the uterus perforated on three occasions by the sound, passing right through the fundus.—The PRESIDENT mentioned that Sir James Simpson had asserted that the sound often perforated the uterine walls, but it was a question whether in these cases it had not found its way into the Fallopian tubes. If the sound traversed the peritoneum there would probably have been some peritonitis set up. In cases of subinvolution, the walls were soft and fatty.—Dr. GRIGG mentioned having seen a case where the sound perforated the fundus, the uterus being infiltrated with cancer; no evidence of the perforation existed post mortem.—Dr. POTTER, on one occasion, when endeavouring to redress a retroflexed uterus bound down by adhesions, perforated the uterine wall with the sound, and felt the point clearly through the abdominal wall, and yet no harm resulted.

Dr. PLAYFAIR exhibited a specimen of Caries of the Pelvic Bones following Delivery, removed post mortem from a patient who had craniotomy performed in two previous confinements. In the last one she had been attended by a practitioner who had applied forceps at the brim. On admission to King's College Hospital, large portions of sloughy tissue were discharged from the vagina, and the urine escaped freely. Intense pneumonia of both lungs, probably of septicæmic origin, accompanied by much prostration, preceded the fatal issue. Post mortem the left sacro-iliac synchondrosis was found to be in a carious condition, the cartilage being entirely diseased, and the bones themselves extensively necrosed. The caries was probably the result of the septicæmia.—Dr. HAYES mentioned having seen the case, and stated that there had been a cough previous to labour, and it was therefore uncertain whether the pneumonia was antecedent to delivery.—Dr. SNOW-BECK inquired as to the seat of the pneumonia, what were the stethoscopic signs, and what the character of the sputa.—Dr. PLAYFAIR explained that there was consolidation, crepitation, bronchial breathing, and the usual post-mortem physical signs. He regarded the pneumonia as of secondary pyæmic origin.—Dr. WILTSHIRE thought it would be interesting to know the character of the locomotion, as there was separation of the sacro-iliac synchondrosis. He would like to know if there were any abscesses of the liver or other organs.—Dr. PLAYFAIR, in reply, stated that there were no abscesses in the liver.—Dr. SNOW BECK said that in septicæmic pneumonia there was a watery expectoration, showing that there was congestion, but there was none of the ordinary rusty sputa characteristic of ordinary pneumonia.—Dr. CLEVELAND thought the question of injury from forceps a very important one. Injury was less likely to happen if chloroform were not given.

Dr. ROUTH related a case of Excessive Prolongation of

the Anterior Lip of the Cervix, which simulated polypus uteri. The projecting body appeared to be from six to seven inches long, and sometimes projected three inches beyond the vulva. It was removed by the écraseur, the actual cautery being then applied to restrain hæmorrhage. There was no history of syphilis to account for the growth.

Dr. ROUTH, in a further report on a case of Fibroid removed by Gastrotomy, stated that on section the tumour was solid throughout, extremely dense, and hard—a purely fibrous growth, surrounded by a layer of black pigment.

Dr. HENRY COOPER ROSE, in a "Contribution to the Statistics of Midwifery in General Practice," gave the results of 1250 consecutive cases of labour amongst the well-to-do people, well nourished and carefully nursed. There were 199 primiparæ and 17 cases of twins; 1209 were vertex and 19 breech presentations. Only two mothers died, and 41 children. Forceps were employed in only nine instances, turning in six, and craniotomy in four cases. Details of the individual complicated cases were given.—Dr. EDIS thought the paper one of great interest. The Society was much indebted to Dr. Rose for relating his experience, and others would do well to follow his example, for we were much in need of such experience to guide us as to when operative interference should be resorted to. With many practitioners the employment of forceps was looked upon as a *dernier ressort*. Dr. Edis had been called to cases, where labour had continued for many days, where the application of forceps succeeded in terminating delivery in less than a quarter of an hour. It would be well if it were more generally known that in tedious and difficult cases of labour the danger was not in applying, but in *not* applying forceps. Numberless children's lives were sacrificed and the maternal risks greatly increased for want of timely assistance.—Dr. CLEVELAND could not but think there was an important connexion between the few forceps cases and the fifteen still-births that were not accounted for. He believed there would have been fewer dead children if instrumental aid had been more frequently resorted to. He agreed with Dr. Edis that it was most desirable there should be some general rule when forceps should be employed. As regards rupture of the perineum, he considered this accident might frequently be prevented by retarding the too rapid advance of the head. Though the dilatability of the perineum varied considerably, he agreed with Dr. Rose in the desirability of always maintaining careful guard and pressure over the uterus after delivery.—Dr. PLAYFAIR thought the communication one of great value. He felt diffidence in making any comments upon it, but thought the proportion of still-births—one in thirty—rather large. It was a matter of urgent necessity to diminish the excessive infant mortality. Dr. Hamilton, of Falkirk, had had 600 consecutive cases without one still-birth, and other 750 cases and still none, owing to the timely application of forceps. At the Rotunda Hospital at Dublin forceps were employed once in every five or six cases, and no children were lost. It was a fault of modern midwifery that sufficient attention was not paid to the life of the child. Forceps were not applied nearly so often as they should be.—The PRESIDENT also remarked upon the very small number of instrumental labours, and the good results to the mothers. He thought the os as well as the soft parts should be dilated before attempting to apply the forceps, and then they might be used with safety to both mother and child.—Dr. B. ROBERTSON inquired if there were any reason for not stitching up the perineum.—Dr. WEST-MACOTT thought the whalebone loop would often prove of service.—Dr. SNOW BECK said if anyone could draw up a code of rules which would serve as a guide for the application of the forceps, he would be conferring a great benefit on all practitioners in midwifery, but he believed this to be impossible: each case presented a combination of symptoms and facts peculiar to itself, and upon these symptoms the judgment and experience of the practitioner would have to decide. As to sutures in cases of ruptured perineum, he regarded them as unnecessary. If the knees were tied together the parts came into apposition, and healing ensued.—Dr. COOPER ROSE, in reply, stated that the death of the patient after convulsions and chloroform seemed due to collapse, as sometimes happened after severe operations, and not to the effect of the chloroform. With regard to sutures in rupture of the perineum, keeping the knees together with a bandage he found all that was necessary to secure good results. He never liked to interfere where nature appeared to be sufficient of herself to effect a cure. In regard to the high rate of still-births, no less than six were the syphilitic offspring of one mother, and others were unpreventable. As to forceps, believing as he did that meddlesome midwifery was bad, he generally preferred patience to instruments, but acknowledged that extended experience might induce him to apply forceps more frequently.

Dr. HENRY GERVIS narrated the particulars of a case of Puerperal Septicæmia which he had watched from the commencement to its termination in St. Thomas's Hospital. The temperature observations from day to day were given and the result of the post-mortem examination. The case presented nearly every feature of septic infection—vaginitis, metritis, peritonitis, parametritis, phlebitis—to a remarkable extent; embolic mischief in both lungs, with concomitant bronchitis, œdema, and pleurisy; congestion of brain, and sero-purulent effusion into some of the larger articulations. The discussion was adjourned until the next meeting of the Society, when Dr. Wiltshire proposed bringing forward a similar case.

Reviews and Notices of Books.

On certain Endemic Skin and other Diseases of India and Hot Climates generally, by TILBURY FOX, M.D., and T. FARQUHAR, M.D.; including Notes on Pellagra, Clou de Biskra, Caneotica, and Aleppo Evil, by H. VANDYKE CARTER; and published under the sanction of the Secretary of State for India in Council. 8vo, pp. 360. London: J. and A. Churchill. 1876.

IN the early part of 1872 the Secretary of State for India, upon the recommendation of the Army Sanitary Commission, ordered copies of "a scheme for obtaining a better knowledge of the endemic skin and other diseases of India," drawn up by Dr. Tilbury Fox and Dr. Farquhar, to be circulated, especially in India, with a view to the collection of information relative to these diseases. The Report before us contains a summary of the various communications received in reply to the request for information, and the comments of the compilers upon the same. In fact, it may be regarded as presenting to the reader a general *résumé* of what is really known of some sixteen important diseases, including yaws, Elephant leg, Delhi sore, Biskra button, Fungous foot, Leucoderma, Oriental ringworm, Malabar itch, Pellagra, and some others. Morphœa, keloid, fibroma, and scleroderma are briefly noticed, and reference is made to their asserted connexion with leprosy, but no evidence is forthcoming in favour of such a relationship; on the contrary, in places and regions where leprosy in its various forms exists these diseases are not more commonly found than in non-leprous districts; nor are they at all more frequently seen in the leprous.

A full and clear account of yaws is given. The sections on Delhi sore, Biskra button, Cretan and Aleppo evils, are very full and complete. These contain an account of the visit Dr. Vandyke Carter paid to Biskra, Crete, and other places, in order to study the Biskra and Cretan sores, together with his notes on the clinical features, pathology, causes, and treatment of these and allied diseases. Drs. Fox and Farquhar notice at length the probable identity of the Delhi and Moultan sores with the Algerian and Cretan *boutons*. They lay most stress upon climatic influences as the cause of these affections, and withhold their assent to Dr. Vandyke Carter's hypothesis of a vegetable parasitic growth as the cause. Dr. Carter's notes are illustrated by five coloured plates, which are well executed. The possibility of certain of the endemic "sores" of hot climates being, after all, nothing more or less than modifications of syphilis, as stated by Dr. Geber in the case of the so-called Aleppo evil, is referred to specially.

The existence of the disease "ainhum" in India was brought to light as a consequence of the circulation of the original "scheme" of Drs. Tilbury Fox and Farquhar. It was first recognised in India by Dr. James Wise, of Dacca.

In the sections on Elephantiasis Arabum are two excellent clinical papers by Dr. Vincent Richards of Balasore and Assistant-Surgeon Sheriff Moodeen. The former analyses the particulars of over 600, and the latter 89 cases. Much difference of opinion has existed at different times as to the cause of the febrile paroxysms of the elephantoid fever. The reports show that elephantiasis may gradually develop without fever, with or without, mostly with, glandular enlargement; but most frequently the first evidence of the disease consists in a swollen and painful state of the glands, the fever being consecutive thereto, though in some cases the gland mischief and the fever seem to be quite coincident. A number of facts are brought forward in reference to this and many other points in the history of the disease. They do not regard the disease as malarial. "Lymph scrotum" is dealt with separately; and the following conclusions are come to:—In reference to the connexion between chyluria, elephantiasis, and lymph scrotum, that chyluria may exist with elephantiasis of the leg or scrotum; but that no *filariæ* have as yet been found in ordinary scrotal enlargement or elephantiasis of the leg, where the exuded fluid is *non-chylous;* and, therefore, although filariæ are the cause of chyluria, they cannot yet be regarded as the cause of the lymphatic obstruction in ordinary elephantiasis. In other words, because *filariæ* have been found in a *certain* form of scrotal disease, it does not follow that they are the cause of all scrotal enlargements, but only those that give out a *chylous* discharge.

Fungous foot of India is dealt with by the reporters briefly. They examine the arguments for and against its parasitic nature afresh, and decide for its non-parasitic origin.

Burmese, Indian, Chinese, and other ringworms are treated of pretty fully. They are shown to be exaggerations of the ordinary tinea circinata of milder climates. The parasitic nature of Tokelau ringworm, an affection common at Samoa, is demonstrated.

Malabar itch, which appears to be Scabies ferox, Lichen tropicus, Leucoderma, and Pellagra, receive special notice at the hands of the compilers of the Report.

It will be apparent from this brief analysis that the Report as a whole contains much valuable information relative to a class of diseases which have not received the accurate study they deserve; and Drs. Tilbury Fox and Farquhar have discharged their labours, which they undertook from their interest in the subject, and, we believe, with the encouragement of the late Sir Ranald Martin, in a way that seems to us deserving of commendation.

Quain's Elements of Anatomy. Eighth Edition. Edited by SHARPEY, THOMSON and SCHAFER. Vol. II. London: Longmans, Green and Co.

WE expressed in a former number (January 8th) a very favourable opinion of the first volume of the new edition of this text-book, and this opinion is increased on an examination of the second volume which has since been published. It contains the general anatomy of the tissues, the anatomy of the viscera, and a complete description of embryology and development.

Mr. Schäfer has introduced all the more important recent researches on the structure and development of the tissues, and they are so well incorporated with the matter contained in the older editions that the easy style which is so marked in Dr. Sharpey's writings is quite preserved. This makes the chapters on histology anything but tedious reading, and is a marked contrast to most works on this subject—Stricker's handbook, for example. The chief innovations are the observations of the junior editor on striped muscle, of Recklinghausen on connective tissues, and of Ranvier on the same group of tissues and on nerves. The last researches are of extreme importance from a developmental standpoint, and are excellently summarised. A careful epitome of Klein's investigations into the structure of the lymphatic system and the serous membranes is given; indeed the writings and drawings of this histologist are frequently laid under contribution. We regret to miss the names of Beale and Bennett from the chapters on cell-formation, as their hypotheses have most important bearings on the cell-theory, even in its present aspect. The anatomy of the viscera is brought quite up to the present date, as may be at once seen in the descriptions of the brain and organs of special sense. Foulis's account of the primordial ova, which is of great value, and bears every mark of careful observation, is introduced. Indeed, if we have any fault to find it is that older descriptions in minute anatomy, but which have not yet been proven to be incorrect, are not adverted to. Thus no reference is made to either Kiernan or Beale in the account of the origin of the bile-ducts, and the modern German view is alone given, although this is by no means so firmly established as to justify the exclusion of the others. Again, all doubts as to the presence of an epithelial lining in the alveoli of the lungs are passed over without mention, and a drawing is copied from F. E. Schultze which we are quite sure will not meet with the acceptance of most English microscopists. The new chapters on Embryology comprise about 150 pages, and we have, for the first time in an anatomical text-book, a continuous and detailed history of the changes which take place in the development of the fœtus and its appendages. This is so important and special a feature in the new edition that it at once places it above all former ones and the other anatomical works in general use in this country. It is written by Dr. Allen Thomson, and, as might have been anticipated from such an excellent embryologist, is singularly clear, lucid, and comprehensive. Foster and Balfour's recent researches are pointed out as being of especial value.

We are pleased to find that the many new plates in this volume are great improvements on the older ones, but those of the cerebral convolutions are much too small.

St. Thomas's Hospital Reports. New Series. Vol. VI. London: J. and A. Churchill. 1875.

WE have always urged that every hospital ought to publish annual statistical reports of its cases with short annotations, showing the nature, severity, treatment, and result of such cases. We must, however, protest against this valuable material from the wards and post-mortem theatre, good and well-arranged as it is in the present instance, being buried in a large and pretentious volume of papers of very slight interest, which could easily have found other and more appropriate places. Thus, only two of the articles in the book before us are of more than ordinary value—viz., one on "Bleeders," by Mr. MacCormac, and another on "Hair-lip," by Mr. Mason. The opening paper by Dr. Peacock, on "Rheumatic Carditis," contains nothing new either in description or treatment, and might have been given as an average clinical lecture to any class of fairly advanced students. The numerous medical and surgical cases should have appeared in the hospital record of one of the weekly medical journals, being no more remarkable than those that are regularly inserted therein. Dr. Stone's suggestions for improving the mechanical adjustments of the sphygmograph, Mr. Wagstaffe and Dr. Reid's

very sparing account of anatomical variations (some of which have been already published), and Mr. Rainey's views on the thymus gland, which are far from being in accordance with modern teaching, are well fitted for a scientific periodical such as the *Journal of Anatomy and Physiology*. Dr. Harley's papers might have found a place in any medical paper, and are of value as showing the uselessness of belladonna in enteric fever, and confirming Dr. Garrod's observations on the inertness of Solanum dulcamara.

We make these suggestions without any desire to decry this particular volume of Reports; but having lately had to examine several volumes of similar productions, and of no greater permanent value, we are led to ask what special indications in medical literature do they fulfil? In some of the earlier Reports, notably those of Guy's Hospital, many papers of extreme importance appeared; but their multiplication at every school, as seems to be the fashion at present, is not only quite unnecessary, but unless much greater pains are taken in the selection of the proper articles, is absolutely detrimental to the best interests of medical literature.

The Causes, Symptoms, and Treatment of Burdwan Fever. By GOPAUL CHUNDER ROY, M.D., F.R.C.S. Lond. London: J. and A. Churchill.

THE new edition of this work comes opportunely when, for many reasons, English attention is so much turned to Indian affairs. The author regards the fever as an endemic disease which has become general, not from any increased potency of malaria, but from diminished power of resistance in the constitutions of the people, brought on by overcrowding, insufficient food, and general poverty. His account of the mode of seizure of each village, and the successive stages of unhealthiness through which its inhabitants pass during the five following years, is very interesting, and strongly supports the malarious view. As to the nature of malaria, Dr. Roy, while deprecating the scientific superstition of those who "are led to unravel the mystery in the unknown phenomena of the celestial world, or seek the aid of electricity in the solution of all difficult problems," does not offer any clearer definition than "that invisible agent which is generated from moisture and vegetable decomposition."

The book is carefully written, and from being a native of the stricken locality, Dr. Roy has had opportunities of investigation unattainable by a European.

The experiments on "the solvent action of Papaya juice on the nitrogenous articles of food," given in the Appendix, are valuable.

OUR LIBRARY TABLE.

The Essentials of Bandaging, with Directions for Managing Fractures and Dislocations, for Administering Ether and Chloroform, and for using other Surgical Apparatus. By BERKELEY HILL, Professor of Clinical Surgery in University College, Surgeon to University College Hospital, &c. Third Edition. London: Smith, Elder, and Co.—That Mr. Berkeley Hill's very useful little manual should have already reached a third edition is in itself sufficient evidence of its merits having been recognised. It is only necessary to state that in a new chapter the author has collected together the various surgical landmarks to be detected on the surface of the body; instructions have been added for the administration of ether; the description of antiseptic dressings has been rewritten, and several new drawings have been added. We can recommend this book as setting forth a large amount of valuable information which will be found essential in the every-day practice of our profession.

Practical Physiology. By Dr. LANKESTER. Sixth Edition. Hardwicke. 1876.—The fact of a book having reached its sixth edition is an evidence of its popularity, and we should not have thought it necessary to mention this but that its author changed its name shortly before his death from "A School Manual of Health" to its present title. It is a safe guide to the non-professional reader, and may be used in schools and classes with advantage. We notice one or two typographical errors that require correction. On page 41 it is stated that ordinary expired air contains 8 per cent. of carbonic acid gas. It should be 4 or 5 per cent. Yawning is not a *series* of deep inspirations, but one deep inspiration and expiration. There are fifty drawings, some good, others, as that of a ganglion on Plate xi., and muscular fibre in contraction, very indifferent. There is an appendix containing questions on the text, and a series of tables.

Air and its Relations to Life. By WALTER NOEL HARTLEY, F.C.S. London: Longmans, Green, and Co.—Mr. Hartley has succeeded in throwing together a great many facts and suggestions of considerable practical worth in a small compass and convenient form. We can recommend this little work as a complete compendium available for the student and officer of health. It is tersely written, and will form a welcome addition to the series of small handbooks, so convenient to the busy practitioner, and not without their value to the practical chemist. It reproduces in a condensed view most of the theories, and gives a simple account of the principal experimental processes, detailed in larger works dealing with the same subject. By collateral extension the argument is also made to include reference to the leading topics in a much wider field than the title-page would seem to indicate.

How to avoid Typhoid Fever and allied Diseases; with Plain Rules on House Drainage, &c., for General Readers. By ARTHUR H. DOWNES, M.B., M.D. London: Baillière, Tindall, and Cox. 1876.—A very good and useful little book in its way. Without containing anything particularly new, and without aiming at being exhaustive, this little *brochure* is so clearly and simply written that the general reader cannot fail to understand what he reads, especially with the aid of the accompanying plates and diagrams, so as to be enabled to apply his knowledge to a practical end.

Bacon's Essays, with Introduction, Notes, and Index. By EDWIN A. ABBOTT, D.D., Head Master of the City of London School. Two vols. London: Longmans. 1876.—We have been much pleased with this edition of Bacon's Essays. The introduction, in which Bacon's thoughts, as divided from his life and works, are set forth, is very well done; and the volumes altogether show that a careful critical scholarly judgment has been exercised. It is the reader's fault if he does not peruse these essays with intelligent pleasure.

The Monthly Microscopical Journal. May 1st, 1876. No. 89. Edited by Dr. LAWSON.—The articles in this number are of little professional interest. They include—1. Note on the Markings of Navicula rhomboides. 2. Some results of a Microscopical Study of the Belgian Plutonic Rocks. 3. A New Microscopic Slide. 4. Measurements of Möller's Diatom Test-plates.

CITY OF LONDON TRUSS SOCIETY.—The sixty-ninth anniversary of this Society took place last week at the Albion Tavern, under the presidency of the Lord Mayor. About 325,000 patients have been relieved since the formation of the Society, and the patients now number 8500 a year. An enlargement of the premises is deemed to be necessary, and on this account, as well as the intrinsic merits of the Society, the Lord Mayor made a strong appeal for increased funds. The subscriptions announced amounted to £584, and the donations to £48.

THE LANCET.

LONDON: SATURDAY, MAY 27, 1876.

THE proceedings of the General Medical Council up to this time have been of a somewhat preliminary and formal character. But they are sufficient to commit the Council to the discussion of questions which may well occupy it for a fortnight. The opening address of the President was considerably longer than most of the addresses of his predecessors, and this was due, not only to some discursiveness of style, but to the number of subjects which, rightly or wrongly, the Council is going to discuss. The fact is, the Council is disposed to take an increasingly large view of its functions, and when one considers the seriousness of the question of medical education, how large a subject it is, and how much larger it admits of being made, it is, perhaps, not to be wondered at that the President's opening address included everything, from vaccination to vivisection. Dr. ACLAND, in ranging at large over a wide field, showed that he was not insensible to the danger—not a remote one—of making medical study so difficult and onerous as to have a deterrent effect. He quoted the facts, lately noticed by ourselves, and brought to light by Dr. FARR, showing that in England and Scotland the supply of medical men to the general population is small, and is getting smaller. In England the supply, in 1851, was 9·7 to 10,000 of the population; in 1861, 8·3; and in 1871, only 7·8. In Scotland for the same years and population, the supply was 7·2, 6·1, and 5·2. In Ireland the supply has, on the contrary, somewhat increased—another among many proofs of the increasing prosperity of that part of the empire. The supply in the above years was respectively 4, 5, and 6 per 10,000 of the population. Viewed in the light of the appreciation of medical services displayed by the public, the profession has no need to complain yet of any deficiency in its numbers. But there are various proofs that a large number of people pass through serious illnesses, and even die, without any medical advice that can be legally recognised. And from the point of view of statesmen this is, or might soon become, a very serious question.

Such a state of matters, viewed in connexion with the increasingly large number of students who come up to our examining bodies for the ordinary qualifications only to be rejected, excites the gravest doubt whether the Council is doing right in devoting one or two days of its time to a consideration of the pending legislation on vivisection. It is true that Lord CARNARVON's Bill touches questions of interest to men engaged in extending medical discovery, but it can hardly be said to have any bearing at present on ordinary medical education. We sympathise entirely and strongly with those who maintain that careful experimentation on animals is justifiable in the interest of physiological, toxicological, or medical discovery, and that great harm will be done by seriously tying the hands of those engaged in scientific research. But with so much else to do in investigating the coarse defects of medical education so painfully brought under its notice every year by the returns from the examining bodies, we cannot see that the Medical Council, in volunteering to formulate its opinion on Lord CARNARVON's Bill, is making such a use of its time as was contemplated in the Medical Act. If the schools were doing their best with the existing means of instruction, if the results of the Professional Examinations by the various bodies showed that pupils had fairly acquainted themselves with the easily ascertainable facts of anatomy and physiology, the case would be different, and the Council might be justified in interesting itself in questions of refined research. But with a proportion varying from a quarter to nearly a half of students rejected in anatomy and physiology, the Council has too serious a duty to perform in perfecting the use of existing means of education to spend its time in questions with which it has no official concern. Of all forms of vivisection, that of torturing students at an examination board imperfectly prepared for it is one of the most cruel, and it is one for which the Council is to a great extent responsible until it undertakes a serious discussion on the returns which are annually presented to it, and which are almost invariably passed over with a few formal words of thanks to the bodies making the returns. The session is just beginning, and we hope that the Council will at this early stage resist the temptation to discuss every subject engaging the attention of the public or the Legislature, and stick to its own business. Keeping strictly within the four corners of the Medical Act it has far more to do than it can get through.

THE public mind has been painfully agitated during the past fortnight by what has been not inaptly termed the "Balham mystery." Notwithstanding the careful investigation which has been going on, no facts have been at present made public to throw any further light upon the case. Speculations as to the possible motives for suicide or homicide have been freely indulged in; ingenuity has been taxed to explain the circumstances attending the case, and, in the absence of a knowledge of facts, theories of all kinds have been set afloat, and every day brings some new hypothesis. It is not our purpose to enter into any detailed consideration of the circumstances of this painful and mysterious case, except in so far as they are necessarily involved in its scientific aspects. Certain of the facts which have been made public are of a sufficiently doubtful character to have caused a suspicion of wilful administration of the poison to have been entertained, and we have no doubt that all the antecedent and attendant circumstances which bear upon these suspicions will receive a thorough, complete, and searching investigation, and, we cannot but hope, a satisfactory elucidation. But there are certain considerations involved of a purely medical character to which we may call attention, which have an important bearing on the questions of the mode and time of administration of the poison.

In the accounts which we published last week by Dr. JOHNSON, Dr. PAYNE, and Professor REDWOOD respectively, we have all the important medical details so far as they have been made public, and to them we shall chiefly refer. We may point out, *in limine*, that although it has been gene-

rally assumed that the poison must have been taken as tartar emetic either in powder or solution, we have no direct evidence from the analysis that such was the case. From the facts, however, that it is the most readily obtained, that it is highly soluble in water, and its flavour is very slight, and that it is not a corrosive poison, and, moreover, that it has been the active agent in nearly all known cases of antimonial poisoning, accidental or homicidal, the probability is very great that it was the substance taken.

It may be useful briefly to recapitulate the symptoms and effects usually produced by antimonial poisoning when the poison is taken in a large dose, as in the present case, in order that we may contrast with them some peculiarities in the symptoms observed, which may have some bearing on the doubtful points—viz., the time of ingestion and the mode in which it was taken. As a rule, the earliest symptom is vomiting, which in the majority of cases occurs within a quarter of an hour, or even less, after the poison is swallowed. This may or may not be preceded by a metallic taste in the mouth after swallowing the poison, and a sense of burning pain in the gullet and epigastrium, but these are by no means constant. Vomiting is usually repeated, at first of the contents of the stomach, then of mucous or bilious fluid, and later in some cases of blood. Purging, with watery or mucous evacuations, which may contain blood, also usually occurs early, and may be much in excess of the vomiting, continuing after it has ceased. But, together with these, symptoms of extreme depression, prostration (mental and physical), and then of collapse, speedily set in, antimony being the most depressing of all known emetics. Not uncommonly, together with coldness of the extremities, and a rapid or slow feeble pulse, which may become imperceptible, unconsciousness supervenes. It need scarcely be said that the concomitant symptoms of gastro-intestinal irritation, such as abdominal pain and tenderness, extreme thirst, and also other symptoms indicative of exhaustion, such as muscular relaxation and cramp and spasms, sooner or later make their appearance. But it must be borne in mind that antimony is extremely variable in its effects in different cases, and that the order of the symptoms is liable to be modified, and some of them may be entirely wanting.

Amongst the points of greatest importance in their bearing on the present case is the period of occurrence of the vomiting. This has been largely dwelt upon as a proof that the poison was taken only a few minutes before the first observed symptoms, and therefore not at dinner, which was probably concluded by half-past eight at the latest—that is, at least an hour before vomiting is said to have commenced. But it is a well-known fact that in some cases where even a very large dose has been taken, vomiting has not occurred until after the lapse of half an hour or even an hour, and then only as a result of remedial measures; but it must be added that in these cases the prostration and collapse have generally commenced at a somewhat earlier period, the stomach being apparently paralysed by the intensity of the poison. Again, it is well known that antimony exerts its effects on the stomach and intestines equally when injected into the blood, and does not determine vomiting solely by its local irritant action, as is the case with arsenic to a large extent. Hence, any condition of the stomach or of its contents which promoted or retarded its absorption would have a corresponding effect in accelerating or retarding the first occurrence of the symptoms. Nor must we overlook the fact that the deceased is known to have taken some laudanum, which may not improbably have checked the occurrence of vomiting, as it is known to check the diarrhœa produced by antimony. If we accept the hypothesis that vomiting commenced within a few minutes of taking the poison, coupled with the statement that means for promoting evacuation of the stomach, such as giving hot mustard-and-water, were immediately employed, it is difficult to account for the extreme severity of the after-symptoms and the fatal result. But that a large quantity had been taken before the first vomiting is evidenced by the relatively great amount calculated by Mr. REDWOOD to be present in the vomited matters collected. Another possibility which must not be overlooked is that of the accidental or intentional administration of a second and larger dose in the fluids given with the ostensible purpose of provoking vomiting.

So far, then, the clinical history, except so far as we may judge from the rapid and extreme collapse, throws but little light on the time at which the poison was taken or on its amount. The post-mortem examination was chiefly remarkable from the fact that the definite lesions were mainly limited to the large intestines, especially the cæcum, in which an ulceration somewhat resembling that produced by the pustular eruption characteristic of antimony was discovered. This fact is not an isolated one, such eruptions having been found on the skin and mucous membrane in other cases of acute, though more commonly in chronic, poisoning. Drs. TAYLOR and PAVY found that in animals poisoned with antimony there was usually general inflammation of the lower half of the alimentary canal. But the noteworthy fact is the total absence of morbid change in the mucous membrane of the stomach, and probably also of the duodenum. This fact alone would indicate the probability either that absorption occurred readily, or that the poison was in a highly diluted form, as would be the case if taken with or directly after a full meal. And the fact that digestion of the matter vomited, which was chiefly meat, had apparently not begun, would indicate the improbability that so long as an hour and a half had elapsed since dinner, though, as we know, digestion may be much retarded by certain articles of diet, such as coffee.

Turning now to the question of the mode or vehicle in which the poison was taken, we encounter certain difficulties if we are to accept as correct the statements made. Two suggestions have been offered as to the vehicle in which it may have been contained if taken at dinner, and especially it has been believed that the Burgundy wine may have contained it. Yet there are certain facts which run counter to this hypothesis. It is well known that tartar emetic is readily decomposed by substances containing tannin, and a precipitate produced, and that ordinary Burgundy would contain sufficient tannin to cause at any rate a turbidity which could hardly pass unnoticed, whilst some of the colouring matter would also be in all probability precipitated at the same time. The extent to which this would occur would vary with the particular wine; but it would be easy to make the experiment in this case with wine of similar quality. It

is of course possible that the deposit might be removed by filtration, if the admixture were intentional, and a sufficiently large quantity remain to poison, or even that the sediment might be drunk with the last glass. But it is evidently desirable, seeing the attendant circumstances, that the most minute investigation as to the time at which the wine was drunk, and the amount left in the decanter, should be made, and more especially as to the deceased's after-dinner habits. Again, it has been suggested that the poison was mixed with the table-salt, and taken at the meal. If, however, it be considered how large a quantity of salt must have been eaten to account for the amount of tartar emetic taken (which must be assumed to have been a far larger quantity than that actually found), supposing that it were even in so large a proportion as one third of the mixture, the consideration alone will render it unlikely that the salt was the vehicle. Again, from the fact that the poison would in that case, be taken in small repeated doses during the whole course of dinner, it will be evident that vomiting must inevitably have occurred before the end of the meal.

So far, then, neither of these hypotheses accounts, in a fully satisfactory manner, for the facts. Nor, until more precise details are available, as to the exact time of dinner, its duration, the interval between its conclusion and the first occurrence of symptoms, and the movements of the deceased in the interval, can we form any more definite conclusion as to the probabilities of the case. One fact, however, which must be borne in mind, is that whilst suicide by tartar emetic is almost unknown, wilful poisoning has, in nearly all cases, been by small repeated doses, and that almost, if not quite, all the recorded cases of acute poisoning by a large dose have been the result of accident, by the mistake of tartar emetic for some other salt.

It is clear that for further light we must look rather to the independent evidence as to the facts of the case, and the circumstances connected with it, and meanwhile, in mere justice to the friends and servants of the deceased man, no credence should be given to rumours and unfounded statements.

WITH the retirement of Mr. SIMON from the medical officership of the Local Government Board and Privy Council Office the second period of the Sanitary Reformation in this country comes to an end. When in 1848 Mr. SIMON became medical officer of health to the City of London, public feeling, which had been first unequivocally awakened by the cholera epidemic of 1831-32, and was about to be still further aroused by the cholera epidemic of 1848-49, was profoundly moved by questions relating to the sanitary condition of the country. Of local illustrations of the depth of that movement, not the least important was the appointment of an officer of health for the City, Mr. SIMON being the first incumbent. Much as the public had been stirred in questions relating to the health of the community, its impulsive desires for the removal of those superabounding conditions of unwholesomeness amidst which it lived would have been not less purposeless and unproductive than in previous periods of pestilence but for the efforts of a few men, foremost among whom were Dr. SOUTHWOOD SMITH, Mr. EDWIN CHADWICK, and Mr. (now Dr.) WM. FARR, who, with rare devotion and indomitable energy, gave themselves up to the difficult task of controlling those impulses, and guiding them to a definite practical end. They succeeded in establishing the main principles of a public health service "in a manner" (to use Mr. SIMON's words) "to require no corroboration, and to admit of little immediate increase," and thus laying firmly a foundation for that superstructure of sanitary legislation, and local and central sanitary administration, which has since been erected. This constituted the first period of our Sanitary Reformation.

Great as the work done within this period had been, its ostensible influence when Mr. SIMON accepted the officership of health for the City, and during his incumbency of that post, was comparatively so insignificant that, writing in 1854 in the preface to his collected official reports on the sanitary condition of the City, he says:—

"Except against wilful violence, life is practically very little cared for by the law. Fragments of legislation there are, indeed, in all directions; enough to establish precedents—enough to testify some half-conscious possession of a principle; but, for usefulness, little beyond this. The statutes tell that now and then there has reached to high places the wail of physical suffering. They tell that our lawmakers, to the tether of a very scanty knowledge, have, not unwillingly, moved to the redress of some clamorous wrong. But, tested by any scientific standard of what should be the completeness of sanitary legislation, or tested by any personal endeavour to procure the legal correction of gross and glaring evils, their insufficiencies, I do not hesitate to say, constitute a national scandal, and perhaps, in respect of their consequences, something more than a national sin."

Proceeding next to describe the graver of these insufficiencies, and calling attention to the complete disseverance of the State from Science in general, and most of all from the sciences related to Life, especially from Medicine, he then observes:—

"Having said so much on the defects and the wrongs of our existing sanitary condition, perhaps I may venture to speak of the almost obvious remedy. 'Almost obvious,' I say; for surely no one will doubt that this great subject should be dealt with by comprehensive and scientific legislation; and I hardly see how otherwise than that it should be submitted in its entirety to some single department of the executive, as a sole charge; that there should be some tangible head, responsible—not only for the *enforcement* of existing laws, such as they are or may become, but likewise for their *progress* from time to time to the level of contemporary science, for their *completion* where fragmentary, for their *harmonisation* where discordant."

Rightly to understand Mr. SIMON's official career, whether as medical officer of health for the City, or of the different departments of the Government under which he served, it must be studied in the light of the sentences above quoted, and more particularly in the fuller light of the whole Preface to which we have referred. This work, and the several reports to which it is attached, deserves the attentive consideration of all who are interested in sanitary reform at the present time, and who would fully understand the position in which that subject is left by Mr. SIMON. They will here find the clue to the various objects which he set himself to achieve when he enlisted in the public health service, and now, after the event, they will be enabled to

judge in what he succeeded and in what he failed. Before all, they will learn that his cardinal object was the infusion of scientific medicine into sanitary legislation and administration.

To those who remember the deep effects on the public produced by the publication of Mr. SIMON's successive reports on the sanitary condition of the City of London, and by the Preface to the collected edition of the reports, his removal from the medical officership of the City to that of the General Board of Health, and subsequently, on the dissolution of that body and the transference of its powers to the Privy Council, to that of the latter department, seemed necessary consequences. The unrivalled grasp of the subjects dealt with, and the rare felicity of diction manifested in these reports, at once placed Mr. SIMON in the fore-front of sanitary authorities; and from the moment of his entering into the service of the State, his influence began to be felt in the promotion of that scientific conception of sanitary legislative administration which he held to be essential to the removal of that "natural prevalence of sanitary neglect" which, although much ameliorated, still remains a scandal to the nation. By his remarkable series of reports, touching every public sanitary question, beginning in 1857, continued to the present time, and forming the great classic of sanitary knowledge in all English-speaking nations, and by the creation of a Medical Department of the Government, he provided for its authoritative information and guidance on the subject-matter of public health questions. How importantly these labours influenced the action of the Government in its measures for sanitary legislation is evidenced by fact that, with few exceptions, the objects sought by Mr. SIMON in 1854 have, bit by bit, been incorporated in the Sanitary Acts. Legislation as to vaccination has been put upon a sound basis; the Sanitary Act of 1866 gave a vast increase to the power of usefulness of sanitary authorities by including those powers which Mr. SIMON had, when he entered upon official life, most found wanting; and, finally, the Public Health Acts of 1871 and 1872 created a special Health Department of the Government and made provision for a definite sanitary organisation in every part of the kingdom, and for the use of the medical profession as an essential part of it. Here, then, was the culmination for which Mr. SIMON had looked and worked. The existing law provided for all essential matters, for a department charged with the enforcement of the law, its progress, its completion where fragmentary, its harmonisation where discordant. It provided for a local administration adapted to local wants, and fitted to maintain the local action in accord with science. The principles of sanitary administration, approved by a Royal Commission, and sanctioned by Parliament, needed only to be carried into effect by the Government Department entrusted with the duty, and, as it seemed, success was assured. But, as the *Pall Mall Gazette* aptly wrote in 1874:—"Contrary to all expectation and probability, there was, in 1872, still a blunder remaining for us to commit in sanitary administration, and we have since committed it. We have already exhausted every source of administrative inefficiency which is to be found in inadequacy of powers, defects of initiative, and obscure intricacy of law. We had set up sanitary authorities who could not act, authorities who would not act, and authorities who did not know when, where, or how to act; it remained for us to establish authorities who could and must act, and then to misdirect and mislead them into a confusion worse than inactivity. Having failed in every possible way at the circumference, we had yet to fail at the centre, and we have done it.....The sanitary army was mobilised in 1872, and in less than two years Mr. STANSFELD has effectually 'clubbed' it."

Mr. SIMON, indeed, at the moment when the success of the principles of sanitary administration, which he had so long worked for, seemed to be secured, had the mortification of seeing them stultified by the blundering of the Department newly created to administer the Sanitary Acts. It is well known now that this happened from the Local Government Board endeavouring to administer the Acts without the help of the skilled knowledge provided for the purpose by the Legislature, reversing wholly the principle of administration involved in the Sanitary Acts, and reducing the conception of preventive medicine to that possessed by an inspector of nuisances, coming entirely untrained to the performance of his functions.

How came so strange a stultification about, and how was it possible for men of liberal education to lend themselves to so gross a burlesque of administration? There is one answer which immediately concerns the profession. It may not be a complete answer, but it covers much of the ground. Mr. SIMON is, in fact, twenty years in advance of his time. Sanitary legislation has progressed—thanks to circumstances not necessary here to discuss—more rapidly than general education on the subject. There are few educated men who have a just conception of the principles which underlie later legislation, and medicine, however vexed it may be, has no right to evince excess of indignation if, after the battle successfully fought in its name, it finds itself temporarily thrust to the wall and discarded for the moment from its proper place in the health-administration of the country. It is not to be expected, as things go with us, that politicians and men of the world will at once concede that position to medicine in health-administration which those medical men most competent to judge claim for it. Medicine, in fact, in this matter is untrue to herself and untrue to those of her members who have to work in sanitary matters. It is to the scandal of the Medical Council that public health and hygiene does not yet form a necessary part of medical education. The Legislature has enacted that every registered medical man may be a medical officer of health. The Medical Council must confess that every medical man is not competent by his training for the post. While this state of things lasts the medical man stands in the relation of a skilled amateur to public health administration, and he can expect no higher consideration than what would be conceded to so anomalous a position. Before Mr. SIMON's conception of the position of medicine to public health administration can be fully realised, there is work to do to bring that conception properly home to the profession. Mr. SIMON's release from official work and appointment to the Medical Council will, it is to be hoped, aid in bringing about this much-needed result. Mr. SIMON has fixed the scientific standard by which the sufficiency of sanitary legislation and administration will in future be tested, and in

doing this he has worthily completed the second period of the Sanitary Reformation in this country.

The ready sense shown by the Government of Mr. SIMON'S merits by his immediate appointment to the vacancy caused in the Medical Council by the resignation of Dr. SHARPEY forbids us assuming that the C.B. recently given to him is the limit of the honour proposed to be conferred by the State upon him for his long and unexampled services to the country in the interest of the public health.

THE Vivisection Bill introduced into the House of Lords by Lord CARNARVON, and read a second time on Monday last, strikes us, we confess, as in excess of the requirements of the case, and beyond what was recommended by the Report of the Royal Commission. We have always been utterly opposed to the cruel practices described as having taken place abroad. While we have always held that no experiment on a live animal should be undertaken without a sense of responsibility, we could not shut our eyes to the fact that such experiments were perfectly justifiable under certain circumstances, and that very important results had been obtained in this way having a direct bearing upon the saving of life and [the mitigation of suffering; and, on the other hand, we had to face such facts as the Duke of SOMERSET advanced, but which are apt to be altogether lost sight of, or quietly set aside by many people as if they had no existence. So far from opposing inquiry, we rejoiced when we heard that the whole question of vivisection, as it existed in this country, was to be made the subject of investigation by a Royal Commission, and we were content to abide by any decision arrived at after a deliberate and impartial consideration of this matter, and we trust that we are not likely therefore to be misunderstood when we say that this stringent Bill has, we believe, been drawn up upon a misconception of the nature and objects of scientific methods of investigation and an exaggerated idea of the extent to which such methods are abused in *this* country, and a fear lest the views expressed by one of the experimentalists examined before the Commission were generally held, or would soon be held, by the majority of them. Now we are convinced that the cruel practices—for they must be regarded as cruel by every rightminded man—which were so forcibly dwelt upon by some of the speakers in the debate could never be carried on in this country; and we think that the provisions of the Bill may, if not subsequently modified, even tend to defeat the objects in view, and exercise an injurious influence on scientific research undertaken for really humane purposes. Practically, we venture to doubt whether some of the requirements of the Bill can be carried out, and whether, as a whole, the measure will not be found, when in operation, to amount to a total prohibition of all experiments, from the stringency of its clauses, and the number of difficulties and impediments that it throws in the way of physiological and pathological investigators. If such prove to be the case, it will exceed the needful limits, and go beyond what appears to us to have been the intention of the Royal Commissioners themselves. While, then, our sympathies are thoroughly with those who would prohibit all unnecessary or thoughtless infliction of pain, and limit, as far as practicable, that amount of pain which is necessary and inevitable, as well as with those who desire to increase the sense of responsibility in all who do not sufficiently realise it, we are of opinion that an unnecessarily stringent measure is only likely to lead to evasions, and to make physiological students seek in foreign schools what they cannot obtain in this country. The Bill, in brief, lays down as its object that an experiment must be performed with a view only to the advancement, by new discovery, of knowledge which will be useful for saving or prolonging human life, or alleviating human suffering, and this by itself seems to us to manifest an absence of appreciation of what is the scientific method of inquiry. Experiments calculated to give pain must be performed in registered places by properly licensed persons, and under the influence of an anæsthetic agent, of which curara is not to be accounted one, and the animal must, unless under special circumstances, be killed before it recovers from the effect of the anæsthetic. Special certificates will be required for all exceptional cases to the foregoing; and reports of the details of these experiments are to be rendered to the Secretary of State, who will appoint inspectors under this Act to see that its provisions are properly carried out. All demonstrational experiments (except under very special circumstances) are prohibited altogether. No distinction is made as to the animals to be used for experiment, although there cannot be a doubt that great differences exist—take reptiles for example—in point of sensitiveness to pain. Dogs and cats are, however, exempted from all experiments. The penalties for offences against the Act are severe, and, as far as stringent legislative provisions can guard against all abuse—if not the use—of animal experimentation, it has certainly been done.

THE *Spectator* is of opinion that the time is come when a change must be made in the appointment of Coroners. Our contemporary considers that the system of election has failed; "that it affords no guarantee whatever for the competence of the officer, who may be a lawyer, or a doctor, or an auctioneer, or anybody else; it is opposed to every constitutional principle respected in the country; and it does not produce the kind of officer who, in an age of universal publicity, is able to secure public confidence." It would be difficult to traverse this record, and disprove its very grave allegations. The oft-repeated struggle to secure the election of a medical coroner places beyond question the fact that no great confidence can be reposed in the intelligent choice of the freeholders. Whether it would be desirable to entrust the appointment of coroners to the Lord Chancellor, or to the Home Secretary, as the *Spectator* suggests, may be open to question. Our own predilection would be in favour of a nomination by the Lord Chief Justice; the officer appointed being a medical assessor to the High Coroner, under whose jurisdiction and in whose name he should hold his court of record. We think there are many powerful arguments in favour of this proposal, but for the present we simply state the following:—1. If all coroners were appointed by the Lord Chief Justice as medical assessors, presiding as his deputies over local courts of record, there would be a controlling legal authority, acting by medical agents, and the function of inquest would be performed with precision, consistency, and vigilance through-

out the country. It might be convenient also to have a smaller number of legal assessors to act with the medical coroners as occasion might arise. 2. In cases of difficulty, the coroner acting in a district would have the advantage of reference for direction without delay, and the local courts would form an integral part of the judicial machinery. 3. The district coroners, being medical assessors, might constitute a jury of reference in criminal cases, to be empanneled at the direction of the Lord Chief Justice, either in aid of the Court of Criminal Appeal, or in such numbers and at such places as might be deemed expedient in aid of courts of assize. We refrain from going farther into detail on this occasion, but shall be glad to see the suggestion discussed. We think it will be found to offer the outline and elements of a scheme worthy of being reduced to a practical shape, and carried into execution.

Annotations.

"Ne quid nimis."

SECRET INQUISITION.

THE assurance that "neither trouble nor expense will be spared in the investigation of the Balham mystery" would be more satisfactory if the inquiry which is to take the place of an abortive secret inquest could be conducted in public. One serious objection urged by public opinion against the investigation made before the Coroner in this case was that the representatives of the press were not in a position to place the proceedings in the light of day. We shall be surprised if public excitement is allayed by another hole-and-corner inquiry, however laboriously and expensively conducted. The mind naturally distrusts any proceeding which requires to be carried on with closed doors, and under the protection of a promise of secrecy. The dislike of such a method of inquest is not diminished by the knowledge that possibly some character is being aspersed, or suspicion deepened to conviction, secretly, in connexion with a mystery which can only be cleared up in public.

The inquiry in progress is either an informal investigation, such as that which may precede any legal proceeding, in which case it is a matter that does not concern the community at large, and ought certainly not to be talked about, least of all paraded to appease public excitement; or it is an illegal inquest held by officials who have no authority to summon witnesses, to administer oaths, or draw conclusions from evidence. It is of the last importance that what is done in the name of justice should be done judiciously. We regret that we are unable to view the proceedings said to be in progress at the office of the Solicitor of the Treasury, and which form the subject of so much whispering around closed doors, with respect or confidence.

The apparently simple business of inquest concerning the cause of Mr. Bravo's death has been unaccountably muddled from first to last. As we showed last week, the jury failed to exercise the power conferred on a majority of their number (by 6 and 7 Will. IV., c. 89, s. 2) to name in writing to the coroner the additional medical practitioner they desired to call as a witness. The coroner failed to comply with the legal obligation devolving upon him when he declined the evidence of a medical witness who offered his testimony. The duty of the coroner and jury under such circumstances is clearly laid down by Jervis in his treatise "On the Office and Duties of Coroner" in the following terms: "The coroner's inquest *must in all cases hear evidence* on oath, as well for the party accused or suspected as for the Crown, *if it be offered to them.*" Stephens in his Commentaries is not less explicit when he says, "the coroner and jury *must hear such evidence as is offered*, either on the part of the Crown or of any party suspected." All legal authorities agree on this point. When, therefore, Dr. George Johnson, seeing "that the coroner was about to sum up for a verdict of suicide, gave him his (Dr. Johnson's) name, and expressed his wish to give evidence," it was not within the discretion of the coroner to decline the testimony volunteered.

It is to be regretted that juries and medical witnesses do not make it their business to understand the law affecting inquests, and take such measures as the statute-book enjoins to prevent a miscarriage of justice. There is something not altogether dignified in the complainings of those who have neglected to discharge their own share of public duty in a business which has issued in failure. Neither the jury nor the medical witnesses concerned in this case are free from blame, or should escape censure. When a public obligation has to be discharged it is imperative that it should be performed resolutely. The right thing must be done in the right way, and it is the plain duty of everybody taking part in a legal procedure to make himself master of the powers entrusted to him, and the action required. Possibly some portion of the neglect and apparent contempt of which medical men complain in courts of justice and law, may be attributed to their own ignorance or non-use of the powers confided to them. We question whether sufficient prominence is accorded to this aspect of "forensic medicine" in the instruction given at medical schools and colleges. There are other matters in respect to which the misdirection of those upon whom it devolves to reduce precept to practice is unfortunately conspicuous. For example, what sort of acquaintance with the practical side of criminal proceedings is implied by a serious attempt to discover where and of whom *ten grains*—in bulk—of tartar emetic could have been purchased? There is something humiliating in the reflection how little medical science and its professors contribute to the cause of justice beyond what is extorted in the witness-box—or doled out in the shape of supplemental information and recollections—when, as too often happens, the opportunity of detecting a crime, or at least preventing unskilled intelligence from going astray in search of the criminal, has been allowed to slip without being adequately utilised.

NEW MEMBERS OF THE MEDICAL COUNCIL.

No less than four new members appear in the General Medical Council at its present sitting. We have already intimated our satisfaction at the appointment of two of these gentlemen—namely, Professor Lister, who will henceforth represent the Crown for Scotland in the place of the lamented Dr. Begbie, and Dr. Pitman, who succeeds Dr. J. Risdon Bennett in the representation of the College of Physicians. The successor of Dr. Parkes is Mr. Thomas Pridgin Teale, M.B. Oxon., F.R.C.S., and Lecturer on Surgery in the Leeds School of Medicine. It was desirable that the provinces should have a representative in the Medical Council, and the choice has fallen on Mr. Teale. There are other practitioners in the provinces who might perhaps have been considered to have a prior claim to this great honour, but Mr. Teale's personal and inherited claims are strong, and his appointment will be generally approved. The fourth vacancy had been anticipated, and so, too, had the fit man to fill it. It has been known for some time that Dr. Sharpey wished to be relieved of his duty as one of the representatives of the Crown in the Council, though every member was reluctant to part with a colleague so shrewd in judgment, so rich in experience, so courteous in manner, and altogether so

influential in council. But Dr. Sharpey's age and imperfect sight entitled him to persist in his wish to resign, and he did so. With the universal concurrence of the profession, Mr. Simon has been appointed to fill the vacancy created by Dr. Sharpey's resignation. Everybody thought that if Mr. Simon felt constrained to resign his post as medical adviser of the Local Government Board, the first opportunity should be taken of securing his appointment to the Medical Council. We do not profess to know upon whose broad shoulders the weight of the responsibility of suggesting names for Crown appointments rests. It would be satisfactory to know more about this, and to be able to apportion blame or praise fitly. But in this case there will be but one opinion in the profession that the right man has been put into the right place. It is not a little curious that as we are bemoaning the loss of Mr. Simon's counsels in one quarter he is straightway placed in a position of great influence in another, where he may be able to further the cause of medicine at once in the State and in the medical schools. Hygiene, as well as disease, continues to be well represented in the Council. The great cause which Parkes and Rumsey have represented will still have a most powerful exponent, and the Council will have one member more who can look at the existing state of the profession and its corporations with something like the eye of a statesman as well as of a practitioner.

DENTAL ANÆSTHETICS AND "DENTAL SURGEONS."

QUESTIONS of the highest practical moment relating to the use of anæsthetics in dentistry and to the practice of unqualified dentists have been under discussion in our "Correspondence" columns. Dr. Barney Yeo, impressed by the condition of a patient who had been subjected to a prolonged dental operation under "the gas"—i. e., nitrous oxide,—proposed certain urgent queries. He inquired whether the presence of strongly marked "physical signs of both aortic and mitral disease," or of valvular obstructions generally, ought not to be regarded as contra-indicating the use of anæsthetics, and if nitrous oxide could be held to form an exception to the rule of caution? Mr. Hamilton Cartwright, Mr. Braine, and Dr. George Johnson have replied, the former pointing out and the latter explaining with singular clearness the fact and causation of great danger attending the administration of nitrous oxide, particularly in cases of pulmonary obstruction or weakness of the right muscular wall of the heart. The passage in Dr. Johnson's letter, in which he exposes the fallacy of inferring strength from increased fulness and tension of the pulse in the first stage of anæsthesia by nitrous oxide, is of great value and interest. Mr. Braine, as an "anæsthetist," does not attach so much importance to the risk attending the use of anæsthetics. Possibly familiarity with danger breeds contempt. We must confess to feeling more sympathy with the caution of Mr. Cartwright and Dr. George Johnson than with the courage of Mr. Braine. Meanwhile, all our correspondents are agreed in respect to one point, and it is for this we are anxious to bespeak general attention. Nothing short of ignorance of the danger they incur or recklessness can induce unqualified persons to administer anæsthetics of any description, or patients to subject themselves to such perilous because unskilled treatment. It should not be forgotten that a dentist is unqualified, whatever his "experience" or manipulative ability may be, if he is not possessed of the knowledge requisite to diagnose or treat the symptoms of general disease. In a word, he is practically incompetent in all cases in which tooth symptoms are dependent upon, or have originated in, a morbid condition of the body as a whole, or of the teeth themselves as organs which suffer in sympathy with the general system. No mere manual dexterity can possibly make amends for the lack of medical knowledge. The non-surgical dentist is, of course, wholly incompetent in a case requiring the use of an anæsthetic. He cannot know how to treat his patient; and so generally is this acknowledged that honest men call in the assistance of an expert to take medical charge of the case and administer the pain-relieving drug while they restrict themselves to performance of the operation. This is obviously a very disjointed and, as far as the public are concerned, most unsatisfactory mode of practice. A question may at any moment arise, either as to the extent of the manipulative process, the condition of the patient, or the administration of the anæsthetic, but no consultation is possible. The qualified surgeon cannot meet the unqualified dentist on grounds of professional equality. Setting all questions of propriety apart, the one does not possess the knowledge necessary to give the basis of any consultation. We think the practical issue raised by this consideration is of vital moment. To speak frankly, we do not hold that qualified medical or surgical practitioners are justified in playing the part of "anæsthetists" to dentists who are teeth extractors and teeth-makers, but nothing more. Would qualified anæsthetists back up the practice of bone-setters or chiropodists? The one true remedy for the existing state of matters in respect to dentistry is supplied by the "Association of Surgeons Practising Dental Surgery." The members of this Association are first surgeons and then dentists. They are qualified to treat any case of tooth disease all through. They can trace effects to their causes, they can administer remedies for both root and branch of the malady, and, whatever occurs in the course of the case, they are armed with the knowledge necessary to deal with it; besides which—a point of great importance to the patient—they are in a position to call in and consult with any practitioner whose aid may be desirable. The public will consider their own interests in confiding their cases to such hands, and by so doing secure safety, which cannot be obtained at the hands of men who are "dentists" and nothing more, even when backed up by the occasional assistance of professed "anæsthetists."

CACOETHES SCRIBENDI.

THIS troublesome malady has hitherto been popularly supposed to be amenable to treatment on the principle, *similia similibus curantur*. When a man began to look upon writing as a pursuit, he would, it was thought, soon cease to suffer from an irresistible longing to appear in print at all possible odd times and places, with or without regard to purpose, propriety, and expediency. We fear there is small hope of Mr. Gladstone being cured in this way of the uncontrollable passion for letter-writing under which he has so long laboured. Curiously enough, it has been by the indulgence of this perilous propensity that the right honourable gentleman has become involved in his worst troubles. Charges of inconsistency, genuine or fictitious, have generally had for their ground some ill-advised or impulsive epistle which has turned up at an inopportune moment. We shall be astonished if one or two of the ex-premier's recent effusions do not hereafter disturb, by useless regrets, the tenor of a mind preternaturally sensitive, and, as commonly happens with such temperaments, prone to express half-formed judgments and embroil itself in needless difficulties. It would be uncomplimentary, almost insulting, to the intelligence of Mr. Gladstone to assume that his views on the subject of vaccination are as vague as he described them in a communication penned to be read before an "anti-vaccination" meeting, at Manchester, on the 17th inst. It is, however, embarrassing to combine the compliment to sagacity with due credit for sincerity. "I regard," wrote

Mr. Gladstone to the agitators, "compulsory and penal provisions, such as those of the Vaccination Act, with mistrust and misgiving, and were I engaged on an inquiry I should require very clear proof of their necessity before giving them my approval; but I am not able to undertake to enter upon an examination of the question." Greater prudence might have spared the author of this untimely suggestion the pain of consciousness that by a skilfully obscure sentence he has contributed to a movement with which he can have no real sympathy. The amiable weakness of wishing to write pleasant words to everybody has occasioned Mr. Gladstone many sorrows. Those who have watched the right honourable gentleman's career with interest (and who has not done so?) during the last dozen years, will hardly fail to recognise the very figure of the phrase with which he now beguiles the anti-vaccinators. We have sincere respect for this truly great man, but he now and then does infinitely little things, and tossing a few meaningless sentences to a particularly selfish and short-sighted clique of agitators is among the least respectable. Of a piece with the pitiful exploit of letter-writing just alluded to, though not so mischievous because less important, is the reply to an inquiry as to the views of Mr. Gladstone on the subject of Sir Harcourt Johnstone's Grocers' Spirit-Licence Bill. He is of opinion that "the holders of grocers' licences are justified in their demand that no legislation favourable to a monopoly adverse to them shall be adopted until the facts bearing upon the case shall have been ascertained by careful inquiry." What precisely Mr. Gladstone means it would be difficult to decide. It is an assumption, without even the pretence of proof, that Sir Harcourt Johnstone's Bill tends to create "a new monopoly in the liquor trade." Nevertheless, upon this hypothesis the ex-premier bases his opinion. It should be apparent to a man of Mr. Gladstone's acumen and great experience that it is neither statesmanlike nor discreet to be thus easily drawn into a controversy or entrapped into giving judgments which judge nothing, and expressing opinions by which nothing is determined. We wish we could urge any consideration by which a writer who has written so much to excellent purpose might be induced to write no more without a purpose worthy of his pen.

A NEGLECTED METHOD OF INVESTIGATION.

BESIDES hindering the study of anatomy, and rendering that of operative surgery difficult and uncertain, the present unaccountable dearth of subjects prevents investigations which are carried out so successfully and with such valuable results abroad. We refer to that study of the human body which is to be effected by plane sections and to the method of inducing fractures and dislocations on the dead body. The advantages to be derived from the former are manifest. The teacher is well aware how errors in regional anatomy are perpetuated in our text-books, and how different the actual relations of structures are when submitted to the test of section. Bodies are generally frozen, and the sections made are accurately drawn by tracings and transferred to the stone from the frozen surface, thus ensuring correctness. In this way works like those of Pirogoff, Braune, Rüdinger, Legendre, &c., are produced. With more material, and more determination to obtain it, no doubt we have anatomists amongst us who might obviate the necessity of our sending to France and Germany for our Regional Anatomy, and, further, we should have the advantage of studying it in our own language.

Again, with regard to the induction of fractures and dislocations, here errors as to causes, suppositions as to effects, and guesses at the actual condition of the seat of lesion, are fully rife, handed down from author to author, copied from text-book to text-book, for the simple reason that too much is taken for granted. Let us mention a dislocation—a common one—that of the metacarpo-phalangeal joint of the thumb. No really satisfactory explanation of this lesion can be found in our text-books, and not any very conclusive doctrine as to treatment; let us refer the reader to the *Archiv Gén de Méd.*, March and April, 1876, where he will find a most exhaustive treatise by M. Farabœuf on the matter, and in which its anatomy in all its complications is cleared up and the treatment determined as a result of this method of research. To instance the value of inducing fracture or dislocation, and studying the results by dissection, we again refer the reader to a current foreign periodical (Langenbeck, *Archiv f. Klin. Chir.*, 19 B., 2 H.) in which Dr. Madelung, of Bonn, has published a most interesting paper, "Die Experimentelle Untersuchungen über die Entstehung der Condylenbrüche am Humerus und Femur," a careful study of which certainly modifies ordinarily accepted opinions on the matter, and indicates a more scientific method of diagnosis and treatment.

Our object is to point out to English surgeons and anatomists that there ought to be no need to be so much indebted to foreign research, save and except that the great obstacle is the dearth of material and its shameful price, and notwithstanding that this want is so often made a subject of discussion, it appears to be as readily dropped again, and no steps are taken to inquire where the fault lies, and what its remedy really is. We sincerely trust that the London teachers will seriously consider the matter.

INDIGNANT VIRTUE "PROTECTING VICE."

MR. STANSFELD is nothing unless "standing-up" for or against somebody or something, with a high sense of heroism and affectation of self-sacrifice, or "just touching the fringe" of some great subject with the superb mien of a master who could do everything, and more, if only he were so minded. Nevertheless, he never, probably, appeared to less advantage than when presiding over an abortive demonstration against the Contagious Diseases Acts at the Westminster Palace Hotel on Friday week last. There was no lack of energy in the language lavished on his theme. With that perfervid eloquence in which he is proficient Mr. Stansfeld denounced the Acts he assailed as "the most indecent, unjust, and unrighteous measures that could be forced on a Christian and civilised country." Carried away by his enthusiasm, the right honourable gentleman failed to perceive that the "indecency" attending this subject arises out of its discussion in the presence of *persons* happily incompetent to form an opinion as to its real nature, by those who care less for public prudence than for passing popularity. The "injustice," if there be any, of the Acts against which Mr. Stansfeld tilts so valiantly, can only consist in denying the right of those who make a trade of vice to carry on their hideous and debasing traffic without the molestation of the law. If it be "unrighteous" to restrain wickedness; if the genius of the Mosaic social economy was opposed to the instincts of goodness and purity; if society ought to mitigate no evil it cannot wholly remove; if it should cure no malady which may be caused by sin; then, of course, the distressed agitators who have been driven to take up this disagreeable question may characterise the Acts which have done so much to reclaim the enslaved victims of a revolting vice as "unrighteous"; but we fancy few Christian philanthropists will be found to agree with them. It is time this question should be finally rescued from the toils of an unscrupulous controversy. We appeal to

the common-sense of men versed in the facts of life, and acquainted with the actual working of these Acts, and to the conscious dignity and decorum of wise and gentle women, not to talk in riddles and vaguely on a topic which cannot possibly be discussed in public, and into which nothing but a prurient taste can induce any one needlessly to pry. It is a subject entirely unsuited to form the theme of platform oratory. Those who attempt to speak about it from a rostrum must talk nonsense. For example, no one knows better than does Mr. Stansfeld that the measures of which he complains so wildly were *not* "forced on a Christian and civilised country." It was because this country glories in its civilisation and recognises some at least of the duties of Christianity that a step was taken to amend that which could not be summarily swept away. It is fortunate for the subjects of this unseemly craze that the measure of "justice" and "righteousness" they would mete out to others is not visited upon the community as a whole. Imagine for one moment the inevitable consequences of refusing to reduce the evil effects of drunkenness lest we should seem to sanction the vice. In theory, no doubt, it is "unrighteous" to establish and maintain asylums for the succour of illegitimate children. We believe there are a few fanatics who would like to see all such institutions abolished, and a certain class of weak-minded persons who only escape from the moral difficulty by a pitiful subterfuge to the effect that not all foundlings are "the children of sin." Society is very forbearing, and looks with great compassion on the feebleness of the well-meaning; but we question whether public opinion can long regard with an eye of tolerance the wilfulness of men of sense and experience who, like Mr. Stansfeld, lend their names to this "agitation," opposed, as we believe it to be, to the well-being of the entire community.

SEAMEN'S HOSPITAL MEDICAL REPORT, 1875.

WE have received the report of the medical officers of the Seamen's Hospital for the past year. It appears that 2045 cases were under treatment, of whom 1941 were discharged or carried over to the present year, and 104 died. Of the 104 deaths, 72 were due to medical and 32 to surgical affections. Of the former, 33, almost one-half, were deaths from lung diseases. Of the deaths on the surgical side, 10, about one-third, resulted from the effects of injury. In 1874 there were more deaths from injuries, just as many from pulmonary affections, and more than double the number of fatal cases of pyæmia. Mr. Johnson Smith, the surgeon, thus speaks of the reduction of the number of cases of the latter disease:—"In 1874 there were 13 deaths from this surgical affection, in 1875, 6 deaths. This diminution in the number of pyæmia cases, and the almost total absence of the affection during the last three months, notwithstanding the presence to the usual extent of open wounds and foul ulcers in the surgical wards, may fairly be attributed in part to the improvements in ventilation, water-supply, and watercloset accommodation that were carried out in the spring of last year. A not inconsiderable share in bringing about this improved condition of the surgical wards may also be attributed to the recent adoption in this hospital of antiseptic dressings. This method of treatment has during the last four months been applied with care and attention to details, and with such success as to fully justify increased expenditure in the item of surgical appliances." The principal event to be recorded on the medical side of the house was the admission of thirty-two cases of enteric fever during September and October from the school-ship *Cornwall*. Apart from this outbreak, it is satisfactory to notice that the general admission of sailors suffering from this disease is less than it has been in previous years. This decrease, the medical officers think, is owing to the attention now paid to sanitary matters at the majority of our English ports, and the activity of the port sanitary authorities in inquiring into the nature of the drinking water shipped on board vessels for the use of sailors. They express a wish that a similar supervision could be exercised at the foreign ports. The question has arisen as to the connexion syphilis has in the production of aneurism. Dr. Ralfe states in his report that as far as his experience goes the question must be answered in the negative. Although a syphilitic history is commonly met with in patients at the Seamen's Hospital, yet in very many cases of aneurism of the aorta admitted under Dr. Ralfe that history has been wanting. The report is a most careful one, and affords evidence of great labour; it is a valuable contribution to hospital statistics.

THE HEALTH OF ROME.

THE lay public, before rushing into print on the subject of disease and its prevalence, would do well to submit their manuscript to the nearest medical man. A great deal of error might thus be kept from circulating, and a great deal of panic be obviated. On no subject is this precaution more required than the health of Rome. People who would be puzzled to distinguish between typhus, typhoid, and intermittent, are incessantly writing to the lay press on "fever" and its fatality in the Eternal City, while the facts are simply these: that intermittent or Roman fever proper is, by itself, seldom or never fatal; that typhus is rarer in Rome than in London or Paris, and that typhoid, when it does occur, has, in nine cases out of ten, been imported with the patient himself. Setting aside Roman or intermittent fever—a disease which, in Abernethy's words, is "fatal only in the hands of the physician," and, even then, not from the febrile poison itself, but from its intensifying some pre-existent malady in the system; setting aside typhus, which is of rare occurrence, and coming to typhoid, in which Rome has been lately said to abound, we beg the lay pathologists in question to consider these points:—First, typhoid is essentially a product of bad drainage and impure water-supply, and Rome—in the English quarter especially—enjoys about the best drainage and the purest water of any city in Europe. Second, typhoid is comparatively rare, as might be inferred from the above facts, among the resident population, Italian or English, rarer than in many of the great cities nearer home; while it has never been observed to prevail as an epidemic But cases of death from it have recently occurred, it is said. True; but on looking into these they are satisfactorily explained thus: Typhoid seldom or never manifests itself till after from ten to fourteen days of incubation; yet most of the patients referred to were attacked with it during their first week's residence in Rome. They must therefore have brought the seeds of it with them, and whence? From Naples or from Florence—cities which are notoriously ill-drained, ill-supplied with water, and that of an impure quality, and which are, as might be supposed, infested with typhoid. In those few cases in which, judging from the period of incubation and the course of the disease, typhoid has been contracted in Rome itself, the explanation is equally simple. The patient, already delicate, or already predisposed by systemic deterioration of some kind to the disease, has aggravated those conditions by imprudences such as are practised only in Rome: over-exertion, sudden alternations of temperature with inadequate clothing, errors in diet. To such typhoid poison as may be afloat, therefore, he falls an easy prey; but surely his illness and death from the disease do not prove that Rome is the prolific parent of it, as has been lately asserted. Nine-tenths of the cases, we repeat, of

death from typhoid fever in Rome are resolvable into cases in which the disease has already been contracted in a typhoid-infected city like Naples, or into cases in which personal imprudence has prepared a *nidus* in which the disease would be quite as easily contracted and run quite as violent a course nearer home. It is high time, however, that these conclusions should be established, as they readily may, and promulgated, as they authoritatively can, be by such a local body as the Roman Academy of Medicine. That institution owes it to the city and to the stranger within its gates to clear the reputation of the one and to retain the presence and patronage of the other.

UNIVERSITY OF LONDON.

THERE are four candidates for nomination at the approaching meeting of Convocation on Tuesday, June 20th, Sir Wm. Jenner, Bart., Dr. Barnes, and Mr. Cooper Forster, on the medical side, and Mr. Shaen as representing the Faculty of Arts. In accordance with a tacit understanding with regard to alternation, which has long prevailed, a medical graduate will be supported by Convocation on the present occasion, an Arts' graduate at the next opportunity. At the last vacancy Sir Wm. Jenner's name was proposed, but no effort was made to elect him, as it was the turn for an Arts' graduate to be selected, and the proposition was made as an indication that he would be brought forward on the present occasion.

We suppose there can be no doubt that Convocation would seek in vain for any medical graduate better fitted than Sir Wm. Jenner, not only by his professional eminence, but also by reason of his vast experience as a teacher, to occupy a place upon the Senate of the University. The following circular has been forwarded to all members of Convocation:—

"DEAR SIR,—At the approaching meeting of Convocation to be held on Tuesday, June 20th, 1876, a list of three persons is appointed to be nominated, in order that it may be submitted to Her Majesty for selection therefrom of a Fellow of the University.

"We beg to propose Sir William Jenner, Bart., K.C.B., M.D. Lond., D.C.L. Oxon., F.R.S., as one of the candidates to be put in nomination at this meeting.

"Medical graduates will not need to be reminded of the grounds upon which a hearty and wide-spread support to this proposition may confidently be expected, but, for the information of the graduates of other faculties, it may not be out of place if we refer very briefly to the qualities which have gained for Sir William Jenner the distinguished position he occupies in the medical profession, and which appear to mark him as one more than ordinarily well fitted to render essential service as a member of the Senate of the University of London.

"To Sir William Jenner we largely owe the certainty with which we can distinguish between two forms of fever—typhus and enteric—that were formerly merged in one common term, by which they were designated but not identified. Out of this distinction, due so much to his sagacity and laborious exertions at the Fever Hospital, there has arisen an advantage to sanitary science, the importance of which it is impossible to exaggerate. The pathological differences which he clearly exposed served as a starting point from which the etiology of the two diseases has been evolved, and with a knowledge of the cause the means of prevention have become a part of our every-day experience. The same precision and equal thoroughness in detail, resulting from unsparing labour in study, distinguish all the other contributions which he has made and still continues to make to medical science.

"As a teacher of clinical medicine Sir Wm. Jenner, during his long career at University College, has attained a position second to none in the profession. Clear, precise, eminently practical, and determinedly honest, his clinique has always been a model of that form of tuition the most valuable of all in its power of influencing the minds of students. It is to his teaching that a very large number of the most distinguished graduates of this University are indebted for the habits of scientific exactness and energy of application by which their success has been acquired.

"Sir William Jenner owes to his professional reputation the confidence which he has so long enjoyed as Her Majesty's private physician. He has never suffered the onerous claims of this position to interfere with his career as a student of science, an accomplished physician who has largely enriched the literature of practical medicine, and a professor who has ever been ardent in the cause of improvement in medical education.

"If you agree with us in our opinion of Sir William Jenner's qualifications for the office of Fellow, we shall be obliged by your signing the accompanying paper, and transmitting it at once to the clerk of Convocation, unsealed.

"We are, dear Sir, yours faithfully,

"ROBERT BARNES, M.D.
THOMAS BUZZARD, M.D.
C. HILTON FAGGE, M.D.
J. COOPER FORSTER, M.B.
WILSON FOX, M.D.
JULIAN GOLDSMID, M.A., M.P.
H. G. HOWSE, M.S.
GEORGE JOHNSON, M.D.
RICHARD QUAIN, M.D.
J. RUSSELL REYNOLDS, M.D.
FRANCIS SIBSON, M.D.
SAMUEL WILKS, M.D.

"56, Grosvenor-street, May 16th, 1876."

It appears to be not generally understood that Convocation is called upon to return three names to the Crown, from which list the Crown elects one to fill the vacancy. Hence there is no inconsistency in a graduate signing the nomination of two or even three candidates. Thus it will be seen that several of the leading graduates support the nomination both of Sir Wm. Jenner and Dr. Barnes. We presume that the fact of Dr. Barnes having signed Sir Wm. Jenner's nomination is not to be construed as a surrender of his own claim, although there can be no doubt that by this act he has greatly strengthened Sir William's position.

DINNER TO SIR JOSEPH FAYRER.

WE do not know with whom the idea originated of giving a dinner to Sir Joseph Fayrer, but it was a "happy thought" in that it fully realised its object. Sir Joseph Fayrer's name is intimately associated with the Indian Medical Service, and it must have been a sincere gratification to him to behold the large gathering that had assembled to do him honour and welcome him home again. There are many ways of achieving success and distinction, but to make hosts of friends in doing so, in addition to retaining the esteem and respect of old associates, requires a happy combination of qualities. The large gathering declared in plain terms that Sir Joseph Fayrer had merited the success he has attained by honest and hard professional work, by integrity of purpose, independence of spirit, and kindliness of character. Dr. Forsyth, a late Inspector-General of the Indian Medical Service, whose name is associated with the expression used by one of the great military men of the East, that "Forsyth was worth 500 men to him," presided. After the usual loyal toasts and those of the Army and Navy, the latter acknowledged by Sir Alexander Armstrong, the toast of the evening was received with hearty and long-continued expressions of pleasure. Sir Joseph, in an easy, effective, and very modest speech, acknowledged the gratitude he felt. After briefly adverting to how much he owed in early life to the fostering care of the president, Sir Joseph dwelt upon the uniform kindness and support he had always received from his *confrères* of the Indian Medical Service, dwelling especially upon the efforts they had made to lighten his task during the late tour of the Prince of Wales in India. Sir Joseph did not conceal that there were occasions when he felt

BEST COPY AVAILABLE

an extra sense of responsibility in connexion with that Eastern tour so successfully conducted and terminated, more especially in connexion with the modification of the Prince's programme in southern India in consequence of the great prevalence of cholera, and the necessary disappointment which this entailed, and subsequently again at Bombay on account of an epidemic of small-pox; but his old friends in his own service, and his new ones in the British Army and Navy, did their best to help him on all occasions. Sir Joseph touched upon the benefits likely to accrue from the Prince's visit to India in regard to the native population. Professor Maclean proposed "The Guests of the Evening," coupling the toast with the name of Surgeon-General Mouat for the British Service, and that of Mr. George Pollock for the civil element present. After these toasts had been acknowledged, and the health of Lady Fayrer had been proposed by Dr. Mouat, and of the chairman by Sir Joseph Fayrer, a most successful and pleasant evening was brought to a termination.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

THE concluding meeting of the session of this Society was held on Tuesday, the 23rd inst. The attendance of Fellows was fairly large, and three important papers were read, none of them *in extenso*, and one so meagrely and hurriedly, during the last five minutes of the meeting, that it might just as well have been "taken as read," had the laws of the Society permitted it. The paper thus formally read to secure its publication was a most exhaustive one upon the Physiological Action of Buxus with reference to the True Nature of Tetanus, by Dr. Ringer and Mr. W. Murrell, which was stated to be supplementary to the papers on Gelseminum Sempervirens now appearing in this journal. Of the other two papers the Fellows present had the advantage of hearing some portions of them explained by the authors themselves—viz., an exposition of the anatomical facts explanatory of the phenomena of ingravescent apoplexy by Dr. Broadbent, and a demonstration of diagrams of pulse-tracings by Dr. Galabin in illustration of his paper on the Causation of the Water-hammer Pulse. But these oral expositions were simply additions to the abstracts of the papers read by the Secretary, and it would be well worth consideration whether the practice followed frequently at the Royal and other scientific Societies of inviting authors, when present, to give briefly an account of the substance of their papers, might not be pursued with advantage by the Medical and Chirurgical. Certainly such a plan might be adopted on the last night of the session, as it would give far more opportunity for discussion than obtains under the present system; for, owing to the time necessarily occupied in the formal reading of the papers, members, seeing how much business must be got through, are diffident of getting up to speak on a subject.

THE PLAGUE.

FURTHER information as to the prevalence of plague in Mesopotamia gives a clearer knowledge of the magnitude of the outbreak. The following are the returns for Hillah and Bagdad from the first commencement of the disease in those towns, not complete, but more complete than any which have before reached this country. Hillah: 1st January to 27th February, 74 deaths; 20th March to 26th, 34; 27th March to 31st, 42; 1st April to 7th, 56; 15th April to 21st, 159. Bagdad: 16th March to 20th, 15; 21st March to 27th, 45; 28th March to 1st April, 75; 2nd April to 8th, 169; 16th April to 25th, 336. At Imam Mousa, near Bagdad, 7 deaths had occurred up to the 21st April; at Nedjef the disease appears to be slowly increasing. The disease has appeared at Kefil, five hours south of Hillah, on the Hindieh marshes, and at Kut-el-Amarah, on the Tigris, south of Bagdad. It is to be inferred, indeed, that the disease is widely scattered throughout the district immediately to the north of its area of prevalence in 1873-4. In addition to the rumour of the appearance of plague at Mascat to the south, rumour now comes of its appearance at Kerkuk, within the limits of Kurdistan to the north.

The alarm in the East with regard to this outbreak is deepening and widening. Communications are more or less interrupted on the different routes from Mesopotamia to Persia, to Syria, and to Kurdistan, while physicians have been stationed at various points on the principal routes to watch for the first signs of the dreaded pestilence. It seems not unlikely that if the disease shows no signs of abatement, the next mail may bring the news of an attempt to prohibit all intercourse between the infected district and surrounding districts. It is understood that the exportation of rags from Mesopotamia has been prohibited (a very judicious precaution), and that efforts are being made to secure wool for exportation from the danger of infection, a danger, however, which is nominal rather than real.

LORD GRANVILLE AT KING'S COLLEGE.

THE speech of the Chancellor of the University of London at King's College on Tuesday was so far an improvement upon his lordship's address at Burlington-gardens on a recent occasion, that he was not tempted to indulge in any idle talk about the "rights" and privileges of women. Lord Granville did not repeat the blunder of leading the public to believe he looks with favour on the demand that women should be allowed to elbow their way through the crowded profession of medicine on equal terms. It is impossible to suppose that so ingenious and far-sighted a social philosopher as the noble lord has shown himself to be can fail to perceive that this craze for a feminine pursuit of physic as the serious business of life is only another momentary outburst of that restless impulse, rebuked eighteen hundred years ago, but apparently irrepressible, which every now and again impels the weaker sex to make frantic efforts to shake off imaginary fetters, and proclaim their emancipation by straightway doing, or striving to do, something infinitely ridiculous. We have precisely the same objection to women undertaking duties more suitably discharged by men, that we should feel if some discontented order of what Miss Becker would probably call "the other sex of man," professed a desire to embark in fancy needlework or millinery as a personal business. This is a wide world, and there is plenty of work waiting the wit and energy of clear heads and strong and willing hands. It is not because medical men are jealous of intrusion or fear competition, that they oppose the chimera of medical women. Lord Granville spoke at the London University as though he thought some feeling of this nature had inspired the opposition. We can assure the noble lord and those who share that misconception, that nothing can be further from the truth. We are quite ready to admit the capacity, but the "power" of doing a weak and ridiculous thing ought scarcely to incite any sober-minded person to crave the "privilege." We think it is much to be regretted that this absurd question has ever been seriously entertained. It is outside the pale of proposals which can be discreetly or decorously discussed.

> "When pains and anguish wring the brow,
> A ministering angel thou!"

—by all means, but not a doctor! What Lord Granville did say chiefly concerned the Vivisection Bill, of which he approves, probably because his keen appreciation of results enables him to foresee that it will turn out a fiasco.

THE NEW ARMY MEDICAL REGULATIONS.

WE have just had an opportunity of perusing a copy of the new regulations regarding admission into the above service, from which we glean the following information. The limits of age on entrance are extended. Every candidate must be twenty-one and not over thirty-two years of age at the date of commencement of competitive examination; his physical fitness will be determined by a board of medical officers, and it is stated that a moderate degree of myopia will not be deemed a disqualification, provided it does not necessitate the use of glasses during the performance of an operation. The candidate has to sign the usual declaration, as heretofore, that his parents are of unmixed European blood, that he labours under no constitutional or mental disease or disability, or hereditary tendency thereto, which could interfere with the efficient discharge of his duties in any climate, and that he does not hold, and has never held, any commission or appointment in the public services. The candidate must possess a double qualification, and be registered under the Medical Act at the time of his appointment. Admission is by public competition, the examination being of a mixed character, theoretical and practical; the latter including operations on the dead body, the application of surgical apparatus, and the clinical examination and report on hospital patients. Every candidate will then have to go through what is termed the Netley course, during which he will receive 5s. a day, as at present, and after satisfying the professors that he possesses a competent knowledge of military medicine, surgery, hygiene, and pathology, he will be commissioned as a surgeon for ten years under the terms of the Warrant, which we have already published. At the end of ten years' service he will be entitled to a bonus of £1000, and the pay of a surgeon so appointed will be £250 per annum, *plus* allowances, which may be estimated as equivalent to £300 per annum. It is expressly stated, however, that the rates of pay, including allowances, while serving in India, will range from 317 rupees (£31 14s.) to 433 rupees (£43 6s.) per month, according to length of service—that is to say, a medical officer will obtain the present rates of pay and allowances.

THE MORTALITY IN PESTH.

IF Pesth is not the most unhealthy city in Europe it is certainly not far from that unenviable position. So great of late years has been the mortality that the Registrar-General, Dr. Körösi, has been requested to furnish a special report on the subject, and the result is a most complete and exhaustive analysis of the state of the public health in the years 1872 and 1873.

Of forty-one other large towns in Europe and America two only show a larger mortality than Pesth. Odessa heads the list, with the excessive mortality of fifty-eight per thousand. Prague comes next, with forty-nine, and Pesth third, with forty-seven per thousand. Next in order come Munich, Trieste, St. Petersburg, Moscow, Madras, Berlin, and Konigsberg; while below these we have a series of British towns, Glasgow, Liverpool, Manchester, &c., with a mortality of about thirty per thousand. Nor is a comparison of the birth-rate and death-rate more reassuring. In five of the large towns selected for comparison the deaths are in excess of the births. These are Pesth (2 per cent.), Prague (5), St. Petersburg (10), Odessa (15), and New York (16 per cent.) The last figure is a striking illustration of the low birth-rate of New York, since the death-rate is only twenty-seven per thousand.

Some of the mortality is to be ascribed to an epidemic of cholera, but the chief part of it is due to the prevalence of phthisis and the great infantile fatality. These two causes account for one-half of the total number of deaths. The mortality is of course greatest among the poorer classes, a large number of whom die without medical attention. A tenth part of the population of Pesth live in cellars. Sanitary reform seems urgently needed, and the report concludes with a series of suggestions and a postscript, in which it appears that indications of improvement are not wanting, and that in 1875 the birth-rate regained its due preponderance.

THE COUNCIL AND THE CONJOINT SCHEME.

WE are glad to see that both Dr. Andrew Wood and Professor Turner have given notice of questions, and that Sir William Gull has given notice of a motion, on the subject of the Conjoint Scheme, which will bring to light the exact state of this matter, and the kind and degree of opposition which is being offered to the scheme in England. May we venture to construe the interest which the distinguished Scotch members of the Council display in the English Scheme into a proof of a desire on their part to see a project for conjunction of corporations and universities in Scotland? For nearly ten years this question has been talked about by the Council and the bodies, but little has been done, though ample provision is made for conjunction in the Medical Act. And several new Acts of Parliament have been got for this very purpose. It is only fair to say that the Scotch corporations, apart from the universities, have conjoint examinations at which a larger proportion of rejections obtains than in any other examination in the kingdom.

SIR WILLIAM FERGUSSON, BART., F.R.S.

THE profession will learn with extreme regret that this most distinguished surgeon is still so ill as to excite grave apprehensions on the part of his medical attendants. Sir William has for some time suffered severely from symptoms indicating emphysema of the lung and hypertrophy of the heart. There has been no evidence of valvular disease. The organic affection has been complicated with albuminuria. Sir William is now confined to his bed. About a fortnight ago Sir George Burrows saw Sir William Fergusson, and has continued to attend him in conjunction with Dr. George Johnson, and on Monday last Sir William Jenner met these physicians in consultation. This is not the time nor place to dwell upon Sir William Fergusson's distinguished career; let it suffice that there is no one among his large circle of friends and admirers who will hear of his illness without a feeling of sincere sympathy and regret.

INEFFICIENT VACCINATION IN LONDON.

THE experience of the Medical Superintendents of the Metropolitan Asylum District Small-pox Hospitals at Homerton and Stockwell appears to prove that vaccination resulting in "good" or even "moderate" marks confers immunity from the fatal effects of small-pox, and that patients with "bad" marks suffer from a mortality little more than a third of that which prevails among unvaccinated cases. The Medical Superintendent of the Stockwell Small-pox Hospital, in his report for 1875, remarks:—"Judging from the number of unvaccinated, and from the inferior quality of vaccination as witnessed in those admitted during the past three years, it would not be unfair to assume that there is still a considerable proportion of the London population unvaccinated, or at least insufficiently protected in the event of an epidemic again arising." This opinion has in former reports been previously expressed by Mr. McCann, and is one deserving serious consideration

from the Local Government Board authorities. Universal vaccination, unless the vaccination be efficient, can never be expected to stamp out small-pox as a fatal disease. It is worthy of note that of eight-nine cases of small-pox admitted to this hospital during 1875, no less than forty-eight were admitted from Lambeth, Greenwich, Wandsworth, and Clapham. The Stockwell Small-pox Hospital contained thirty-six small-pox patients on Saturday, 20th inst., of whom thirty-one were returned as vaccinated and five as unvaccinated; of the thirty-one vaccinated cases no less than seventeen were admitted during the week. It would be interesting to know what proportion of these patients bore "good," "moderate," or "bad" vaccination marks.

MR. SHAW-LEFEVRE, M.P., AT UNIVERSITY COLLEGE.

AT the recent distribution of prizes in the Medical Department of University College, Mr. Shaw-Lefevre's address was marked by more breadth of thought, and was of more general interest, than is usually the case on such occasions. He referred especially to the numerous statutes affecting the medical profession which had been lately passed, almost without an exception during the reign of the present Sovereign, as showing the immense strides which our profession was taking in public estimation, and the increasing duties and responsibilities which were being cast on it. The Legislature, by its two great sanitary measures of recent years—viz., the Public Health Act and the Act for improving the condition of labourers' dwellings in all densely-populated towns—had practically "established the medical profession" for the first time, and had recognised the necessity of skilled medical opinion in matters of public hygiene. The more adequate representation of our profession in Parliament was therefore a matter of primary importance, and we are glad to find Mr. Shaw-Lefevre bearing testimony thereto. A striking and most interesting comparison of the rise and progress of medicine with the modern doctrine of evolution preceded the formal congratulations with which the address concluded.

THE LONDON HOSPITAL.

WE understand that there is to be a sharp contest for the post of assistant-physician to the London Hospital, and that the day of election has been fixed for the 7th of June. A large *clinique*, an enlightened and liberal lay committee, the arrangement by which an assistant-physician has charge of beds,—with such considerations as these it is no wonder that the post should be well sought after. We are entirely ignorant of the *mode* of election, but we cannot doubt that the authorities of the London Hospital will carry out their spirited policy in this as in other matters which they have lately undertaken. Surely the day is past when a shoal of letters from members of Parliament, peers of the realm, city magnates, *et hoc genus omne*, addressed to members of a hospital staff, should be allowed to influence an election which ought to be decided on medical and not on social grounds.

REGISTRATION OF FOREIGN DEGREES.

ONE of the questions which the Medical Council will be called on to consider at its present sitting is a petition from various graduates of foreign Universities, who are also doubly qualified in the British sense of the word, praying the Medical Council to obtain power to insert in the Medical Register, as *additional* qualifications, foreign degrees conferred by examination upon duly qualified registered practitioners. The somewhat restricted policy of our Universities undoubtedly drives many meritorious men to foreign universities for degrees, who feel it a hardship not to be able to register these degrees at home. This is a grievance for which a remedy should be provided. If the petitioners mean the Council to ask for a discretionary power to register degrees which it thinks worthy of recognition, we wish them every success, and hope that the Council will take trouble to get such power when any amendment of the Medical Act takes place. But we should be sorry to see the Council obliged to register every foreign degree. There are degrees and degrees.

THE GLASGOW ROYAL INFIRMARY.

IT has been resolved to have a medical school in connexion with this hospital, and the following gentlemen have been appointed lecturers:—Midwifery, Dr. Jas. Stirton; Medicine, Dr. A. Wood Smith; Materia Medica, Dr. John Dougall; Pathology, Dr. D. Foulis; Surgery, Dr. Hector C. Cameron; Medical Jurisprudence, Dr. Wm. MacEwen; Chemistry, Mr. John Clark, Ph.D.; Anatomy, Mr. Henry E. Clark; Physiology, Mr. Wm. James Fleming, M.B. It was inevitable that such a field as is supplied in this great hospital should be utilised. We are against the excessive multiplication of schools. But there is room enough in Glasgow for this school, and the competition of teachers with such a *clinique* can scarcely fail to have a good effect upon the University schools. One thing is necessary, however, to put the school into a position to compete fairly, and that is to provide all the plant and apparatus necessary for teaching. The best teachers cannot teach in the absence of these, which doubtless will be forthcoming.

PUBLIC attention is annually called to the wretched provision made for the comfort and health of hop-pickers. The Local Government Board has just issued a timely circular to the sanitary authorities in the various hop-picking districts. There is abundant evidence that evils seriously threatening the public health are among the consequences which result from the neglect to provide decent lodging and accommodation for the hop-pickers, and in order to obviate these evils the Board urges the propriety of taking steps to secure before the commencement of the next hop-picking season effectual means of providing proper accommodation within the districts. The Board enclose a copy of the bye-laws which they have confirmed for the Bromley Union, and suggest that each sanitary authority should take an early opportunity of considering the provisions contained in them with a view to their adoption. The revised bye-laws deal with the construction, ventilation, and lighting of habitations, allowance for floor space, provision of screens for beds, with cooking-houses, water-supply, bedding, cleansing of habitations, and removal of filth, and with privies; whilst penalties against persons offending against these bye-laws are enacted. The regulations appear to be drawn up with care and discrimination.

ON Saturday the Princess Louise re-opened the Victoria Hospital for Sick Children, Chelsea, which had been temporarily closed for the purpose of enlarging the building. The institution, which is entirely dependent on voluntary subscriptions, is now fitted up with sixty-five beds. In the course of the ceremony, Earl Granville and the Earl of Shaftesbury spoke in support of the charity, and the latter urged the necessity of increasing the number of hospitals set apart for the treatment of the diseases of childhood, and also the importance of improving the dwellings of the humbler classes. Since its opening in 1866, about 2500 in-patients and 116,000 out-patients have been treated in the Victoria Hospital.

BY the death of Dr. Chadwick, of Southport, the profession has lost a highly-esteemed member, and the public of Southport and adjacent localities a benefactor whose munificence knew no limit. Samuel Taylor Chadwick, who was born in 1809, on the borders of Cheshire, obtained the M.R.C.S. and L.S.A. in 1831, and subsequently the F.R.C.S. Eng. and M.D. Edin. He commenced practice in Wigan, where he remained for six years, thence removing to Bolton, where he conducted for many years a very large and lucrative practice. The institutions he founded and endowed, and the innumerable good deeds which will cause his name long to be cherished, are set forth in completeness in the pages of the local press. The regard in which Dr. Chadwick was held found a practical expression in 1873, when a statue was erected to him in the Town Hall square of Bolton, and unveiled in the presence of about 30,000 people. Dr. Chadwick was married in 1831, but leaves no children. We hope next week to publish an obituary notice of the deceased gentleman.

THE elucidation of the causes which produce insanity in a given number of people placed under restriction annually is of great and absorbing interest to the profession. In the report of the Royal Edinburgh Asylum for the year 1875, just issued, Dr. Clouston, the medical superintendent, states that intemperance was by far the most frequent cause of alienation in the patients admitted during the year. After pointing out the two forms of mental disease caused by intemperance—one transient and the other incurable—Dr. Clouston makes an interesting comparison of the prevalence of those types in the Edinburgh Asylum with the records of other places. Thus, such mining counties as Durham and Glamorgan produce the most marked and fatal of all the brain diseases produced by alcoholic excesses in twice the proportion observed in Edinburgh; while, on the other hand, "we stand at twice the amount of the agricultural counties on this head." We are glad to observe that the untoward results of the excitement induced by religious revivals are brought under notice.

A RECENTLY published report of the medical officer of health for Wolverhampton, Mr. A. Love, deals with the question of diseased meat as an article of diet. After dwelling on the alleged diversity of opinion among professional men as to what meat is actually good for food, and, if diseased, in what stage of disease it should be considered unfit for human consumption, Mr. Love describes the conditions which in his opinion constitute sufficient grounds for condemning a carcass. We much fear that, in spite of existing restrictions, a very large quantity of unsound meat continues to be sold and eaten in our large towns, with an injurious effect on the public health.

SHEFFIELD seems in a fair way of obtaining a fever hospital at last. The need of such an institution in the town has been only too patent. Difficulties however—particularly the question of site—have interposed to prevent the realisation of the wishes of the profession and of the majority of the inhabitants. The main obstacle in the way has now been surmounted, and a site considered eligible in every respect purchased. We understand that the erection of a hospital of sufficient capacity to accommodate fifty patients will be proceeded with without delay.

AT the meeting of the Quarterly General Court of the Governors of the Middlesex Hospital, held on the 25th inst., the vacancy occasioned by the retirement of Dr. R. Liveing was filled up by the promotion of Dr. William Cayley to the office of physician. Dr. Sidney Coupland was, at the same time, elected to the office of assistant-physician.

THE epidemic of small-pox in Salford seems to be increasing at a very serious rate, chiefly in the Pendleton district. Fresh cases are continually reported, but happily the fatality of the disease is not as yet great. The Board of Guardians evince a desire to take all possible measures to arrest the progress of the outbreak. Wooden sheds are in course of erection in the garden attached to the workhouse, to be used by convalescent patients from the infectious wards in the building. Did the guardians possess a separate hospital of their own for the reception of infectious diseases, they would be relieved of the difficulty and confusion now experienced in providing the requisite accommodation. The lesson of this epidemic for other Boards of Guardians is, to have the foresight to provide a hospital of this sort ready for any emergency.

AT a meeting of the Council of the Poor-law Medical Officers' Association held on Tuesday evening, it was decided to ask the President of the Local Government Board to grant an interview to a deputation for the purpose of urging on him the advisability of extending the dispensary system to provincial towns and rural districts, and also of drawing his attention to the partial results which have ensued owing to the superannuation of Poor-law medical officers being simply permissive instead of compulsory.

WE regret to announce the loss of William Holme, M.D., who died at Clifton, Bristol, on the 16th inst. He served in the Crimean campaign from July 27th, 1855, including the siege and fall of Sebastopol, for which he was rewarded with the medal and clasp, the Fifth-class Order of the Medjidie, and Turkish medal. He became Deputy Inspector-General in 1862, was placed on half-pay in 1870, and attained the honorary rank of Inspector-General in 1871.

THE mortality in the metropolis last week was at the rate of 20 per thousand annually. The deaths, 1341 in number, included one from small-pox, 41 from measles, 39 from scarlet fever, 5 from diphtheria, 65 from whooping-cough, 20 from different forms of fever, 15 from diarrhœa, and 277 referred to diseases of the respiratory organs. Measles of a bad type would appear to prevail in Harrow.

ANOTHER sad instance of the perils inseparable from the practice of our profession is reported from Devonport. A local practitioner, Mr. Wilson, while performing a surgical operation last week, injured his hand. Inflammation rapidly set in, and after a few days' suffering the unfortunate surgeon died. It is stated that one of his brothers died from a similar cause three years ago.

DR. CHARLES FITZGERALD, Dublin, has been appointed Surgeon-Oculist to the Queen in Ireland. The appointment appears to have caused some amount of dissatisfaction amongst part of the profession in the Irish capital, who are of opinion that there are ophthalmic surgeons who had greater claims for the distinction than Dr. Fitzgerald.

A SPECIAL meeting of the Annual Committee of Convocation of the University of London, on Friday the 19th inst., was held to discuss the Conjoint Scheme. After a long sitting, further consideration of the question was postponed for a fortnight.

WE are sorry to hear that Dr. Lowe, of Lynn, has met with an accident while riding near that town. He was thrown off his horse, and, in addition to other somewhat severe injuries, sustained a fracture of the clavicle.

THE King of the Belgians has been pleased, within the last few days, to confer upon Sir Henry Thompson the high grade of "Commander of the Order of Leopold."

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THE GENERAL COUNCIL OF MEDICAL EDUCATION & REGISTRATION.

Session 1876.

WEDNESDAY, MAY 24TH.

THE Annual Session of the General Medical Council commenced on Wednesday afternoon, the President, Dr. Acland, in the chair. Four new members of the Council were introduced, viz:—Dr. Pitman, in the place of Dr. Bennett, Professor Lister, in the place of Dr. Begbie, Mr. Simon and Mr. Teale, in the place of Dr. Sharpey and Dr. Parkes.

The PRESIDENT then addressed the Council, as follows:—

THE PRESIDENT'S ADDRESS.

The Medical Council meets once more, deprived of four of the members who shared last year its deliberations.

Dr. Bennett, as President of the College of Physicians of England, removes his clear, calm judgment and assiduous services to another and kindred sphere.

The persuasive speech and large knowledge of Dr. Sharpey will be long missed by the Council. Feelings of hearty regard will linger round the earned repose of this Nestor of biological science.

Of Begbie and Parkes I can scarcely speak. Any formal obituary notice would be out of place here. Yet may it be said that Dr. Begbie was already endeared to us all, having won at once by his gracious presence that esteem which all Scotland had long bestowed. The Council would probably hold any words from the President concerning Dr. Parkes to be inadequate. His purity of heart, his self-sacrifice, his courage, his grasp of details, were beyond praise. Whenever his powers were brought to bear on our work (and when were they not?), we felt them to be the powers of a strong man, whose strength was surpassed by his generosity, his gentleness, and his goodness.

Whilst regretting these great losses, we cannot but feel that the interests of the science and practice of our profession, the care of the public health, the progress of medical education in its complex relations, will be honourably and efficiently considered by those appointed to succeed them.

Although the work of the Council lies strictly within the Act of 1858, it nevertheless increases as time goes on. The Council closely holds to the function of securing a sound education for those who have to do with individual or with national health. But the whole question of national education has shifted within the last twenty years, and the relation of the public to the medical profession, in respect of scientific knowledge, has altered also.

When Mr. Walpole's Bill of 1858 was passed, the corporations of physicians, of surgeons, and of apothecaries were still generally accounted in England the chief promoters of biological learning. Now, universities and society at large are not less its promoters and guardians.

In literary serials and in common society abstruse questions on all the physical sciences, and notably on biology, are freely discussed in a way which, fifty years ago, very few persons even in the medical profession could have followed. Psychological problems find data, formerly unexpected, in minute physical inquiries into development, inheritance, and pathology, ranging through the animal series of every epoch of the globe.

It is not then surprising that the topics, which the Council has to consider, little favour a supposition once entertained, and last year alluded to—viz., that its work would be almost ended when all the licensing bodies had been visited by inspectors, and their reports had been received. It would be nearer the truth to say, that when once the whole Council was satisfied that it could implicitly rely on the uniformity of a minimum standard in all the examinations, then there would be leisure calmly to study in detail the exact value of that standard, and of the education which was to be tested by it. The Council would then be in a position to take a broad view of the relation in which the medical student of our day stands to modern wants, modern science, and modern division of professional labour. The Council has had once and again to do this in a general manner; but the many undiscussed reports before us may satisfy us what a mass of unsolved detail remains.

Dr. Farr, the eminent statistician, at the beginning of the year drew my attention to a statement in the Supplement to the Thirty-fifth Report of the Registrar-General.* He says there that in the army there is a surgeon to every 202 men: in the general population 1 to every 1276 of the population. The proportion of medical men was in 1851 9·7 to every 10,000 living, 8·3 in 1861, and only 7·8 in 1871. In the army 49 per 10,000 are required. It has become a matter of public concern, that it is difficult to supply the vacancies in the army medical staff with competent practitioners.

Dr. Farr further writes to me: "One thing is certain, that the medical attendance for the people of England was extremely defective in 1851, and that it is still more defective in 1876. The danger is, that it may grow quite inaccessible to vast numbers of the people. We know how this arises. Every one in the profession wishes to see every man in it instructed up to the highest standard."

It appears from Dr. Burke that in Ireland the proportion of medical men seems to have increased from about 4 to each 10,000 in 1851, to 5 per 10,000 in 1861, and 6 per 10,000 in 1871.

But Mr. Pitt Dundas states that in Scotland the number has diminished, as in England. There were 7·2 per 10,000 in 1851, 6·1 per 10,000 in 1861, and 5·2 per 10,000 in 1871.†

Should it appear on investigation that the supply of medical men is inadequate, and that the poorer classes especially are attended by unregistered practitioners, it may become a proper subject for inquiry by the Council whether there is any ground for supposing the examinations to be undesirably deterrent, or the methods of preparing for them in any special manner inadequate, or whether there are any details of study enforced, which have no direct relation with the clinical practice of their profession, and of which the average student's memory may be lightened; or whether the secondary schools which our students attend do indeed give the best preparation for the medical life, whatever that may be.

This subject has an important bearing on the question which is more and more forced upon the Council, how to ensure such a test of a sound minimum education in each branch of the kingdom, as can be relied upon, not so much for its severity as for its wisdom, and which we may feel sure is the fittest preparation for actual practice and daily life. It will appear presently that a sharp debate may spring up on this matter from an unexpected quarter.

It may be well here briefly to refer to subjects brought before your Executive Committee since the last meeting. These have been few, but neither unimportant nor unsuggestive.

First, as to Registration of Death Certificates. Representations have been again made with regard to the signing of death certificates by unqualified practitioners, or by qualified practitioners in cases where they have never seen the deceased.‡ The Registrar-General has written fully on the subject in letters§ which appear in the Minutes of the Executive Committee. It will be a public benefit if this often-raised question bring about a uniform and satisfactory mode of certifying to the causes of death in the three branches of the kingdom. The Registrar-General is entitled to the thanks of the Council for his uniform and courteous attention to a question, often repeated, because in its very nature difficult of settlement in both dense and thin populations. An apt illustration of this is found in the Weekly Return of Births and Deaths in London for the 13th of May. "During the three weeks ending the 6th instant, the causes of no less than 13 per cent. of the deaths

* Supplement to Report of Registrar-General, p. 82.

† For the above figures I am indebted to the kindness of Dr. W. Farr F.R.S., Dr. Burke, and Mr. Pitt Dundas.

‡ See Executive Committee, March 23, 1876.

§ Branch Council for England, April 11, 1876.

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registered in Peckham were uncertified either by registered medical practitioner or by coroner. This unsatisfactory condition of the death-register is mainly due to the employment of unqualified assistants by medical practitioners in that neighbourhood. When patients are *exclusively* attended by unqualified assistants, no legal certificate of the cause of death can be obtained unless an inquest be held."

Second, as to Proficiency in Vaccination. A case of some importance should be named to the Council, though a further statement will come from a Committee. A practitioner in Essex was refused an appointment under the Local Government Board, in the district where he lived, on the ground that his certificates were not in conformity with the regulations of the Board, as regards the knowledge of Vaccination. Such a refusal, besides causing inconvenience, would tend greatly to his discredit. He had complied, as he believed, with all that had been required by the Medical Council and the College of Physicians, and had the testamur which the College recognised. It was ascertained that this was not a solitary case, and as it was one calculated to inflict real hardship on innocent students, no time was lost in obtaining the fullest information on the causes of the occurrence. That information has been laid before the Executive Committee, and before the Branch Council of England, and Committees have been appointed to report on the whole subject. It had been hitherto supposed to have been finally adjusted by the careful discussions in the Council in the years 1867 and 1868.* It is to be hoped that such regulations will hereafter exist that both the efficacy of vaccination and the character of the younger practitioners may be alike secured.

We may pass to subjects brought before the Legislature since we separated. The attention of the Government was drawn to the state of the Conjoint Scheme in England, by a question put in the House of Commons on March 9, 1876, to the Vice-President of the Privy Council. Lord Sandon's reply was that, "The Government has reason to believe that, as regards England, considerable progress has been made towards settling the basis of an arrangement which is likely to receive general assent. We have not the like information respecting Ireland and Scotland; but if satisfactory arrangements are concluded in England, I cannot but hope that they will lead to a like result in the other parts of the United Kingdom. In this state of the case I cannot give any opinion as to what may be the views hereafter of Her Majesty's Government, as to the expediency or necessity of proposing legislative measures to promote or hasten the general adoption of the 'conjoint scheme.'"

It is possible that at a later period of our meeting the matter may be more fully gone into. At present it stands broadly thus. After thirty-nine meetings at the College of Physicians, a scheme for England was agreed upon in 1874, by all the bodies in England, except the Apothecaries' Society, and was accepted by the Medical Council. In the course of last year, before it could come into operation, this approved scheme was re-discussed at the instance of the Royal College of Surgeons of England.

Another scheme was agreed to, after seven meetings, by a majority of the representatives of every licensing body in England. It must be a matter of regret to Sir James Paget, the assidnous Chairman at these conferences, that all the bodies represented have not confirmed the conclusions of the majority of their representatives. The only scheme now before the Council is that of 1874, which is not cancelled; but, also, it is not in operation. There is therefore no motion on the subject before the Council; and there is no "conjoint scheme" for England. The facts remain as heretofore, that a qualification either in Medicine or in Surgery entitles students to be placed on the Register; and there is no common standard for a minimum qualification. It is right, perhaps, to add to this brief statement, that the College of Physicians in England adds Surgery and Midwifery to its medical examinations, and is recognised as conferring a qualification in Surgery and Midwifery, as well as in Medicine, and that the College of Surgeons adds medicine to its surgical examinations when a candidate has not a medical qualification.

The Bills which are before Parliament need not detain the Council long to-day. The Council has partly gone into the subjects of both. (See Minutes of Council as to Mr. Cowper Temple's Bill, June 24, 25, 26, 1875; as to Public Health, July 7, 9, 1869.)

Mr. Cowper Temple's Bill, the same as that of last year, will not, unless the Council change its opinion, be taken as an adequate settlement of the vexed question of women's admission to the Register. Nor is the Government likely, therefore, to promote its passage through Parliament. At the same time, considering the opinion expressed by the Council in a report on the subject last year (June 26); considering the promise by the Government on the withdrawal of Mr. Cowper Temple's Bill, that attention should be given to the question; and considering the Act obtained last year by the College of Surgeons of England, and its difficulties this year with regard to granting licences in Midwifery, it would seem both impracticable and impolitic to defer a settlement of the question.

Mr. Gibson's Bill deals with two subjects only. The first is, the equality of qualification for certain offices in Ireland, on which information is required before the Council can ask the Government to support the Bill; the second is, the registration of Public Health diplomas or certificates as an additional qualification. On this subject a Committee of the Council has already reported. Mr. Ouvry also gave his opinion as to the form of a clause for a Bill recognising Public Health certificates. It was laid before the Council on March 1, 1870. This might be a proper subject for a Committee, inasmuch as the Government has asked the opinion of the Council on Mr. Gibson's Bill, and awaits an answer before announcing its intentions thereon. This point, also, does not admit of delay. It may be remarked, that the Universities of Dublin, Edinburgh, Cambridge, Oxford, and London, have successfully instituted examinations in subjects bearing on Public Health. In a Sanitary Conference held in London in the early part of May, and presided over by Lord Aberdare, it was suggested that the chief medical officers of health should be required to have such certificates or diplomas. A Report on the subject from the British Medical Association will be laid before the Council.

There appears to be a growing feeling that the possession of certain professional attainments defined by the Medical Council should, without regard to sex, be the condition of admission to the Medical Register. This is part of the general movement in modern society, and notably in England, America, and Russia, which may be cheerfully accepted by some who would not spontaneously promote it. There is a further conviction that there should be a completer and more systematic training for women who are engaged in midwifery, and a registration of those who are properly qualified according to a legal standard. As regards both of these propositions, the Council will doubtless feel that if, either by an enabling or compulsory Bill, or by the creation of a new Examining Board, women are admitted to the present Register, and also classed in a Register of their own with special qualifications, still there will remain many details with respect to education, hospitals, schools, and examinations, which will severely tax the attention of teachers and licensing bodies, and ultimately, and that before long, occupy this Council.

The Right Hon. Russell Gurney indeed is prepared to bring in a Bill in which it is proposed that the existing licensing bodies shall be enabled, though not required, to admit persons to examination without regard to sex. This Bill will be shortly laid before you for consideration, by desire of the Lord President, who requests your opinion thereon. A communication from the President of the Council of the College of Surgeons, regarding the position of the College in respect of midwifery licences, will be also submitted to you. But it would occupy the time of the Council too long to enter fully into these two subjects on this occasion.

One other detail requires notice to-day. A question was put by the Commission on the practice of subjecting live animals to experiments for scientific purposes, whether the Medical Council recommended the establishment of physiological laboratories, or whether the recommendation came from individual teachers, or the different medical corporations and licensing bodies (Q. 980). The subject had been advisedly postponed last year, and has not been discussed by the Council. But it is one of the class just now alluded to as requiring careful attention, and a motion on the subject will be proposed for your consideration, with regard to

* Vol. v., 280—286; vol. vi., 229—236.

the Bill introduced into the House of Lords on cruelty to animals by the Earl of Carnarvon.

In this connexion it may be named that the Government desires to afford every facility to members of the Medical Council for examining the remarkable educational appliances and apparatus for scientific research, now collected at South Kensington, whether from England or from foreign countries. This valuable series throws light upon the question of the extent of training in physical science which is thought possible by various countries, either in ante-professional education or in relation to technical professional studies. It may be quite right that time, money, and energy should be freely—nay, lavishly—expended by great investigators on matters which may be useless, even injurious, to ordinary students.

It cannot be doubted that great freedom of action in this matter should be left to individual teachers of advanced students, while the Council collectively fixes the standard which is indispensable for attaining an adequate knowledge and skill for the practice of their profession.

The Council, in looking over the programme of work before it, will observe the number of Committees which will be proposed for appointment.

The Reports of Visitors, as well as the observations upon those Reports, that have yet to be considered are numerous. The Committee nominated on June 18th, 1875, presented a Report on June 25th on thirteen of the Reports of Visitations; and this is found in the Minutes of that date. Several important general questions are raised. The same amount of interest and industry bestowed for many years on this part of our duty by Dr. Parkes will, we may be sure, be brought to bear by Professor Humphry, whom the Executive Committee have asked to take up this work during your pleasure.

When the Reports of the Committees are before the Council, either at this or a subsequent meeting, the Council will be in a position to revise the recommendations which it has issued, and on which it has received commentaries from the several licensing bodies. Of all these recommendations probably none will demand graver consideration than those which press on the nineteen licensing bodies the importance of combining to form Examination Boards, and those which suggest that no persons be placed on the Register who have not an adequate knowledge of every branch of their profession. The Council cannot fail to observe that the tendency to create new qualifications which press for admission to the Register, by the bodies independently, has not diminished, as is shown by the independent action of the Universities in respect of the new examinations in Public Health, and the concurrent desire expressed in various quarters to make these additional qualifications or titles admissible on the Register. On all these and many other points, the free discussion, for which the meetings of this Council afford us an opportunity, is a great instrument for evoking order out of the disturbed conditions necessarily attending a transitional epoch, and a period of rapid, and on the whole satisfactory, progress.

I will detain you no longer from the consideration of the various important subjects which will be brought before you.

On the motion of Dr. ANDREW WOOD, the President's address was ordered to be entered upon the Minutes.

The Business Committee of the Council was then reappointed, Dr. Wood, Chairman. The Finance Committee was also appointed, Dr. Pitman taking the place of Dr. Bennett.

On the motion of Mr. TURNER, Dr. Pitman was appointed Treasurer of the Council.

Dr. PITMAN said he accepted the office with pleasure, and hoped with the kind assistance of his colleagues to be able to fulfil its duties to the satisfaction of the Council.

The PRESIDENT read a letter from the Registrar asking permission to resign his office, which he had held for eighteen years in November next.

The PRESIDENT said he had long been aware, though it had not been publicly announced, that the Council would this year lose the services of its Registrar, who had filled that office from the commencement, and of the value of whose services there could be but one opinion. (Hear, hear.) He thought it would be unseemly and undesirable to press Dr. Hawkins to continue in an office which he now felt was too laborious. He hoped that in some more formal way the Council would be able to express its sense of his valuable services.

Dr. WOOD said that as Chairman of the Business Committee he was perhaps able better than any one else to know the extreme intelligence, courtesy, and attention with which the Registrar had fulfilled his duties. He was quite sure that they all wished Dr. Hawkins health and happiness in his retirement. He had been their friend as well as their Registrar, and they were very sorry to lose him. What the Council had now to consider was the course to be taken with regard to his successor. He suggested the desirability of appointing a committee to consider carefully the duties of the Registrar in the future, his status and his emoluments—a subject requiring very serious consideration. The Council would have the services of Dr. Hawkins until the 25th of November, and there was no necessity for any hasty action. An opportunity should be given to men of acknowledged ability and business habits to offer themselves for the appointment after its duties and emoluments had been settled.

Dr. STORRAR seconded the motion, which was unanimously adopted. The Committee consisted of Dr. Quain (chairman), Dr. Pitman, Mr. Quain, Dr. Haldane, Dr. A. Smith, Dr. Leet, and Dr. Storrar.

Mr. QUAIN moved for the appointment of a committee to consider and report on (1) Mr. Cowper-Temple's Bill, with resolution of King and Queen's College of Physicians in Ireland; (2) Mr. Gibson's Bill, with resolution of King and Queen's College of Physicians in Ireland; (3) Letter from the Obstetrical Society of London, with the President's letter to the President of the Royal College of Surgeons of England, and his reply thereto; (4) Report on State Medicine Qualifications from the British Medical Association; (5) Memorial from English Practitioners possessing Foreign University Degrees.

Dr STORRAR seconded the motion.

Mr TURNER suggested that it would be desirable to refer also to the Committee the Bill to be brought in by Mr. Russell Gurney, bearing as it did on the same question as Mr. Cowper-Temple's Bill. He also proposed that two Committees should be appointed for the consideration of the various subjects mentioned, on the ground that they were too numerous for one Committee.

Dr. HALDANE seconded Mr. Turner's amendment, which, on being put to the Council, was lost, and the original motion was carried.

Dr. HUMPHRY proposed that the communications from licensing bodies on the reports of visitors should be inserted on the Minutes, together with a note to the effect that no observations had been received from the Queen's University in Ireland.

Dr. WOOD seconded the motion.

Sir D. CORRIGAN protested against the singling out of one body for censure, and asked why the Apothecaries' Hall had not been included in the same category, no communication having, he believed, been received from that body. The Queen's University had declined to make any observations until all the visitations had been completed. With regard to the communication from the University of Dublin, he understood that it had been drawn up by the professors, and was not a communication from the Board.

Dr. SMITH said it had been adopted by the Board.

Sir D. CORRIGAN said that the respectable clergymen on the Board would no doubt approve of anything sent up by the professors. Communications had been received from the Queen's Colleges of Belfast, Cork, and Galway, and he hoped that they would at some future time come before the Council; for he believed it would be very difficult for the visitors to get out of the scrape into which they had fallen.

Dr. HUMPHRY reminded Sir D. Corrigan that Apothecaries' Hall had sent in its observations last year. He had no intention to "censure" the Queen's University; he simply stated a fact.

After a short conversation the proposed note respecting the Queen's University was withdrawn, and the motion to enter the communications on the Minutes was carried, as was a subsequent motion to refer them to the Committee of Visitations appointed last year.

LORD CARNARVON'S BILL ON CRUELTY TO ANIMALS.

Mr. LISTER moved "That a Committee be appointed to consider the Bill introduced by the Earl of Carnarvon on cruelty to animals, and to report to the Council." He felt that no apology was required for bringing the subject before the Council, as every one must be satisfied that the Bill introduced by the Earl of Carnarvon was one that demanded very serious attention at their hands. Two courses had been suggested—one to appoint a small Committee to consider the sub-

ject, and the other for the Council to resolve itself into a Committee for that purpose. He preferred the former course, and he proposed it accordingly.

Dr. A. SMITH said the first thing to do would be to take the Bill as read, and order its insertion on the Minutes, which he proposed should be done.

Sir D. CORRIGAN opposed the proposition. The Council was established to enable the public to distinguish qualified from unqualified practitioners; it was a Council of Education and Registration, and he maintained that Lord Carnarvon's Bill came under neither of those heads. If they took it into consideration they would have to go into the question of the game laws, the ringing of pigs' noses, the best mode of shoeing horses, and the like, and it was impossible to say where they would stop. The matter was altogether outside the province of the Council, and he objected to its being considered. If he stood alone he would divide the Council on the subject.

Sir WM. GULL could not believe that Sir D. Corrigan was so wilful as not to be convinced when a matter was put fairly before him, and he was therefore not without hope that he would consent to the appointment of a committee to consider the Earl of Carnarvon's Bill. They were a Council of Education, and one of their duties was to consider the course of study and examination to be gone through by medical students. He agreed that the purpose of the Council was to enable the public to distinguish between qualified and unqualified practitioners. But how was a man to be qualified except through a proper course of study? and it was the duty of the Council to decide what that course should be. It was not enough that a man should be able to pass an examination; that might make him a qualified practitioner in a very qualified sense, but it was not all that was to be desired. The Council being charged with the duty of supervising the course of study to be gone through by practitioners, could not be otherwise than interested in any legislation which might tend to throw impediments in the way of the study of natural science. He willingly seconded the proposal of Mr. Lister.

Dr. ROLLESTON called attention to the statement in the preamble of the proposed Bill, "whereas it is expedient to amend the law relating to cruelty to animals—viz., by extending it to the case of animals which for medical, physiological, or other scientific purposes," &c. This, he said, clearly brought the question within the domain of the Council, and he was in favour of its being taken into consideration. He might disagree with the views of Professor Lister on the subject, but every one interested in the welfare of the medical profession would desire that the Council should give a district pronunciamento upon it. The licensing bodies had issued regulations upon it, and upon such regulations the Council had constantly to sit in judgment.

Dr. WOOD supported the motion for putting the Bill upon the Minutes of the Council, and contended that the question was one having a material bearing upon the education of medical practitioners, and therefore coming within the scope of the Council's duties. Indeed he thought the Council would stultify itself if it did not take the question into consideration.

The motion was agreed to.

Mr. LISTER then renewed his motion for the appointment of a committee to consider the subject.

Dr. HUMPHRY, in seconding it, said that the experiments on animals were largely connected with the advances to which they looked forward in regard to physiological science. He agreed that the subject should be taken into consideration, and he did not know how it could be better considered than by a committee who should report on it to the Council, and bring up such points as they might think desirable.

The motion was carried.

Mr. LISTER nominated the following committee:—Mr. Simon, Professor Rolleston, Dr. Humphry, Mr. Turner, Dr. A. Smith, Mr. Lister.

Sir WM. GULL thought, that on a matter of such great importance, on which a Royal Commission had been appointed, the Council should resolve itself into a committee of the whole Council to consider the whole matter. This course, he suggested, would be more satisfactory to the public and the profession than the appointment of a small committee.

Dr. STORRAR concurred in the view expressed by Sir Wm. Gull. He thought that the matter should be first considered by the whole Council, and then, if necessary, referred to a committee.

Mr. TURNER pointed out that last year the question of Mr. Cowper Temple's Bill on the admission of women was first referred to a committee, and subsequently considered by a committee of the whole Council. It would, he thought, be desirable that the subject should be brought up in the form of a preliminary report.

Dr. WOOD supported the appointment of a committee who, he thought, would "take the guts out of the bill," and bring the matter up in a form in which it could be most easily discussed, and at the same time show the public that the medical profession was not chargeable with wanton cruelty in the pursuit of their investigations.

Dr. ROLLESTON hoped that, if a committee were appointed, Sir William Gull would be added to it.

The proposal to consider the subject in a committee of the whole Council was then withdrawn, and the committee proposed by Mr. Lister was appointed, with the addition of Sir Wm. Gull, Mr. Teale, and Dr. A. Thomson.

On the motion of Dr. Wood, the observations on the recommendations and opinions of the Council from various licensing bodies were referred to the committee appointed last year, and the committee was instructed to consider the whole question of the Registration of Medical Students.

Dr. STOKES, in moving "That a committee be appointed to take into consideration the recent warrant relating to the Army Medical Service," said the army should be available as a means of promoting instruction to its medical officers, and the comparative rank and status of medical officers should be as far as possible assimilated to those of combatant military surgeons, they being exposed to the effects of direct military action in the field, besides having to combat with disease—both local and epidemic. The surgeon's duty should have relation to every circumstance of the soldier connected with the whole of his moral and physical condition. The soldier should not be regarded as merely a fighting man, but should be intimate with his surgeon in every one of his sanitary and physical conditions. The surgeon's care should extend to the soldier's domestic relations—to his moral as well as physical well-being, in the first of which he should be associated with the regimental chaplain. It had been settled that retirement from active duty on the part of the medical officer should take place after ten years' commissioned service, unless the surgeon was specially selected for further employment in the medical department of the army. If such was not the case his services were dispensed with, and he was entitled in lieu of pension (excepting from wounds) to the sum of 1000*l*. In the event of disability from sickness or accident within five years a medical officer forfeited all pension, and after six months' half-pay his services were dispensed with, and he had no further claim on the department. The consequences of this regulation upon the individual were to unfit him equally for civil and military employment, while the pittance he earned at the termination of his military career was calculated rather to injure him than otherwise. He would become a mere mercenary, devoid of that military spirit without which the best professional man would fail to make a good army surgeon. The real faults of the new medical warrant were as follows:—That it limited the number of selections for promotion to six annually, out of all incoming candidates who had completed ten years' service, whereby five-sixths of those entering year by year were stranded with a wholly insufficient recompense for the ten best years of a young man's life. That an officer under five years' service might be dismissed the service if unable to resume his duties after six months on half-pay. That officers of twenty years' service remained junior to the rank of lieut.-colonel—a regulation not enforced in other departments. That the new scale of pay was not made applicable to present officers. That the maximum rate of daily pay after twenty-five years' service had been reduced from 27*s.* to 25*s.*, which caused a corresponding depreciation in the present very insufficient rate of voluntary retirement. That no statement had been made as to the rate of pay to be given to candidates when serving in India. That the sum of 1000*l.* did not represent the value of ten years' service to those not selected for promotion at the present rate of voluntary retirement after twenty years' service, namely, 12*s.* 5*d.* per diem. If recompensed at the same rate, the young officer should receive 6*s.* 5*d.* per diem, a sum the capitalised value of which in an individual of thirty-one years of age amounted to more than quadruple the sum offered by Government. To remedy such defects, he would suggest that the new rate of pay should be applicable to all officers, and that the maximum daily pay of 27*s.* 5*d.* be restored; that the clause limiting the number to be selected on to the permanent establishment be cancelled, awarding to those who wished to retire, or whom it was undesirable to

retain in the service, a retiring bonus calculated upon a daily rate of 6*s.* 5*d.*—half the sum at present obtainable after twenty years' service; that officers of twenty years' service should not be junior of their relative rank, as in the case of chaplains and commissariat officers; that young officers incapacitated through ill-health within five years' service be adequately compensated, and that every medical officer who had performed his duty adequately and with unblemished reputation might look forward to the administrative rank of his profession as a reward for long and faithful services. Attention should, moreover, be given to the position of militia surgeons, who had lost a large proportion of their emoluments by being deprived of the examination of recruits, with no compensation to themselves, and additional unpaid labour to the army surgeons. Militia surgeons had further in many cases been deprived of their assistants and hospital sergeants, and were consequently compelled to undertake the duties of those two officers besides their own.

The motion was seconded by Dr. ANDREW WOOD.

Dr. A. SMITH said that he had no knowledge whatever of the army warrant except what he had been able to collect from the observations of Dr. Stokes; but, as far as he could see, the matter was one with which the Council had really nothing to do. The matter was not one relating to the education of doctors for the army, but it related merely to the question of money to be paid for their services.

Sir WM. GULL said that he was sure they always listened with the greatest possible respect to whatever came from their venerated friend, Dr. Stokes; but he was sorry to find himself unable to agree with him as to the relevancy of this particular question. If the Council had been what might be called—to refer to one of Massinger's plays—"a Parliament of love," he should go in for this question very strongly; but they were charged simply with matters which related to education and registration, and the subject of the army warrant was *ultra vires*.

Mr. LISTER said that the motion seemed to open up a number of questions as to what the functions of the Medical Council were. The subject of the motion was one which was worthy of their attenion, and it interested the medical profession if it did not come strictly within the range of medical education. He thought, however, that it might be said to have a connection even with education, as it opened up the question whether there was a sufficient inducement held out by the army authorities to induce young men to obtain the required qualifications for army service.

Dr. ANDREW WOOD thought they were in some way entitled to consider the action of the Army Medical Board. For some years that Board had been saying that the men who went up for examination by them had failed to pass, although they held qualifications for general practice. The Council, however, had recently altered that condition of things, and he thought that they were entitled to say to the Army Board, "If we give you better men, why do you not give them a better status and better pay?" He considered that they were entitled to take the matter up, and go into committee upon it. The other day an examination was held by the Medical Department of the army, and there was only a sufficient number of applicants to fill the vacant posts, so that the competition came to an end. He thought it was a matter for inquiry why a department which ought to secure the services of really good men, failed to get them. He believed that the reason was that medical men in the army were not put into a proper status. Whatever decision the Council might ultimately come to on the subject, it would be discourteous to Dr. Stokes, and unjust to themselves, to refuse a committee.

Mr. MACNAMARA supported the motion. He believed that if they appointed the committee they might probably find out some way in which they could serve the Government, the country, and the profession.

Mr. BRADFORD, in supporting the motion, said that he had passed the greater part of his life in the army, and he had no hesitation in saying that the recent warrant had very much injured the position of the army doctors. The present system was calculated to deter respectable men from entering the medical service of the army, and was a reflection upon the profession at large. It was obvious that if the system were not altered, only an inferior class of men would be available.

Dr. A. THOMSON thought that the question was beyond the province of the Council.

Dr. ROLLESTON said that medical men in civil as well as in military life were often badly treated and under-paid. He did not think that they were properly treated in any service except that of the United States, which had set an example in that respect to the whole civilised world. He doubted, however, whether a pecuniary transaction between medical officers and their employers was a proper subject for the consideration of the Council.

An amendment by Dr. A. Thomson, seconded by Mr. Turner, "that it does not come within the province of the Council to take into consideration the recent warrant relating to the Army Medical Service," was carried by a large majority.

The Returns from the Army Medical Department were ordered to be entered on the Minutes.

THE CONJOINT SCHEME.

The PRESIDENT said he had no further communication to make on this subject beyond that which he had made in his opening address, but he hoped before the sittings were concluded to inform the Council of the exact position of matters to the latest moment.

Sir D. CORRIGAN: Is the scheme as far advanced as it was last year?

The PRESIDENT: I am not now prepared to state.

Dr. WOOD said, before the conclusion of the session he would put a question to the President as to the state of the conjoint scheme of England.

Mr. SIMON thought it would be well that information on the subject should be given at the earliest possible moment.

The PRESIDENT said that if notice was given of the question, he would undertake to give the best answer in his power.

Professor TURNER also said that he should ask the President for information as to any resolution arrived at by individual bodies that were to become members of the Board.

PRELIMINARY EXAMINATION.

Mr. MACNAMARA called attention to the list of bodies recognised for preliminary examination as proposed by the Executive Committee, and asked how that list had been prepared, and how it had been ascertained that they were qualified to conduct preliminary examinations. It had been found, he said, that some of the pupils who had passed the examinations of certain bodies in the list were sadly wanting, and it was desirable to know whether such bodies ought to have appeared on the list.

Dr. WOOD said that the list was under the care of the Executive Committee, and anybody applying for recognition was bound to supply all the information required as to the mode in which its examinations were conducted.

The PRESIDENT said that the list was prepared some years ago, and great pains were taken with reference to it by Dr. Storrar, as chairman of the Education Committee. The list had been greatly extended.

Dr. SMITH said that the majority of the preliminary examinations were arrant shams. The present committee was not responsible for the list, only a very few bodies having been recently added.

The Council then adjourned.

THURSDAY, MAY 25.

The Council re-assembled to-day at two o'clock.

On the motion for the confirmation of the Minutes of the previous sitting,

Dr. STORRAR called attention to the bulky character of the Minutes, consisting, as they did, of 125 printed pages, and including reprints of several Parliamentary bills and other long documents set down for the consideration of the Council. He referred to a report from the Finance Committee of 1870, in which it was recommended that, in most cases, in order to lessen the expenses, abstracts only of the various documents to be considered should be printed, the original documents being preserved for reference. He thought it opportune to call the attention of the Business Committee and of the Council to the matter. He was afraid they were encroaching upon their finances, and it should be remembered that their means were not without limit.

The Minutes having been confirmed,

Dr. WOOD proposed that, instead of proceeding to the

usual business of the Council, an adjournment should take place to enable the various committees to meet and prepare their reports.

After a short conversation this course was agreed to, and the Council adjourned, to reassemble for a short time at half-past five for the transaction of formal business. The sittings will be resumed this day (Friday).

PUNISHMENT DRILL.

To the Editor of THE LANCET.

SIR,—Will you allow me to enter my protest against the introduction of a system of punishment drill into our public and other schools? I should regard such an innovation as a very disastrous one.

For some years past I have been endeavouring to persuade some of our school authorities to introduce drilling as *a regular part of every boy's training*, and I have urged that time for this purpose should be abstracted from that which is now allotted (in excess, as I think) to cricket and football. With the highest respect for these latter games, which I believe especially tend to make English youths what they are, it appears to me that they signally fail to give good carriage or to encourage a good style of walking. As a rule, I venture to assert that the average public school boy has a careless gait, and walks heavily with rounded shoulders. Let anyone walk from Windsor to Eton and observe for himself, and he will find this statement but too true. I do not wish to see our boys adopting the style of young German lieutenants, but I would direct attention, by way of comparison, to the Woolwich cadets, whose superior gait is simply the result of regular drilling in addition to athletics. There can be no question as to the special advantages attainable by drill, and I am confident that if a whole school had to undergo the system there would be no objection on the part of the boys. At present this matter is treated in a most narrow manner by school authorities, who practically make drilling as distasteful as possible by allowing it to certain boys as a set-off against games. This is most unkind and unwise, but I am confident that a change will ensue before long, and I look forward to the time when every public school boy will add to his other training some knowledge of drill. That the drill-master should ever be a terror to English boys is, I hold, a grievous matter, and the suggestion is as unwholesome as it is unpatriotic. For the purpose of punishment, let the curtailment of cricket or football enjoyment be held out, but let no stigma be attached to drilling.

I am, Sir, your obedient servant,

DYCE DUCKWORTH, M.D.

Grafton-street, Piccadilly, W., May 22, 1876.

POISONING BY TARTAR EMETIC.

To the Editor of THE LANCET.

SIR,—The lamentable case of Mr. Bravo, which is now causing so much excitement in the public mind, may be some excuse for bringing before the notice of your readers a parallel case which occurred in my own family. In the summer of 1849, the nursemaid, after a drive on a very hot day, experiencing great thirst, requested my assistant to supply her with an effervescent draught. Being short-sighted, he overlooked three bottles containing tartaric acid, and substituted from two to three scruples of tartarized antimony, and this the nurse hastily swallowed. Fortunately, being within a minute's call, I had several urgent messages sent to me to go home immediately, when I found her in great agony. Violent vomiting had already taken place; there was great contortion of the features, livid countenance, and clammy sweats. The vomiting continued incessantly for more than twelve hours, the bowels were violently acted upon, but at this distant date I am unable to remember the character of the motions; but I do recollect that part bloody sputa were expectorated.

The treatment I adopted was similar to that which has been carried out in the case of Mr. Bravo, with the exception that no injections were used. After a few weeks she recovered her usual state of health, and she remained in my service for two years after, when she died of slow fever.

Although during this last attack she had no pressing enteric symptoms, there was a lingering impression in the minds of herself and her relatives that she had never entirely cast off the effects of the poisonous dose.

I remain, Sir, yours, &c.,

Hanover-square, Leeds, May, 1876. THOS. FOSTER SAGAR.

Medical News.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—The following gentlemen having passed the required examination for the diploma, were duly admitted Members of the College at a meeting of the Court of Examiners on Thursday, the 18th inst:—

Barrow, Charles A. G., Woolwich, Kent.
Buckell, Leonard M., Romsey, Hants.
Dick, Arthur E., Halesworth, Suffolk.
Hasleden, Robert, L.S.A., Bolton, Lancashire.
Hookham, Paul, Oxford.
Moullin, James A. M., Porchester-terrace, Bayswater.
Orr, James W., L.S.A., Pemberley, Bedford.
Pickering, Charles F., Exeter.
Smith, Gerard H., Blackheath, Kent.
Thompson, Edmund J., L.S.A., Appleby Magna.
Turner, Walter P., L.S.A., Stamford, Hythe.
Twining, Alfred H., Walthamstow.
Ward, Alexander, Upper Norwood.
Webster, John, L.S.A., Market Deeping, Lincoln.

Of the 74 candidates examined on the 16TH, 17th, and 18th inst., 16 failed to satisfy the Board of Examiners, and were referred for six months' further professional study.

The following gentlemen passed the first part of the Professional Examination for the Fellowship on Tuesday and Wednesday last:—

H. E. Juler, St. Mary's Hospital; R. J. Godlee, University College; E. A. Birch, Manchester; G. S. Harpur, and W. A. Frost, St. George's Hospital; J. F. C. H. Macready, H. F. Weiss, A. R. Anderson, and W. B. Clarke, St. Bartholomew's Hospital; F. Treves, London Hospital; J. Mackern, Guy's and Aberdeen; H. G. Lowe, Birmingham; T. E. Hayward, P. A. Steedman, and R. H. A. Schofield, St. Bartholomew's Hospital; W. Lane, J. C. Uhthoff, and R. S. Wainwright, Guy's Hospital; B. J. Newmarsh, T. F. H. Smith, and W. J. Milles, King's College; G. R. Turner, St. George's Hospital; H. S. Bott, Manchester and University College; J. Cantlie, Charing-cross Hospital; W. Alexander, Liverpool; J. S. N. Boyd and D. J. Williams, University College.

Twenty-seven candidates failed to satisfy the Board of Examiners, and were referred for six months.

The following is a programme of the lectures to be delivered by Professor R. Brudenell Carter, F.R.C.S., commencing on Monday, June 5th:—Lecture I.: On Ophthalmology in its Relation to General Surgery. Lecture II.: On Glaucoma. Lecture III.: On Iridectomy and its Uses. Lecture IV.: On Iritis and Sympathetic Ophthalmia. Lecture V.: On Cataract Extraction. Lecture VI.: On Strabismus.

APOTHECARIES' HALL.—The following gentlemen passed their examination in the Science and Practice of Medicine and received certificates to practise on May 18th:—

Badcock, George Sainthill, Camberwell-green.
Simpson, James Herbert, Pontefract.

The following gentlemen passed the Primary Professional Examination on the same day:—

Hemming, William Douglas, King's College.
Lake, William Wellington, St. Thomas's Hospital.

PRESENTATION.—Mr. William Watson Dove, who has for a long time held the appointment of assistant medical superintendent at the Somerset County Lunatic Asylum, has been presented by the officers of the institution with a handsome dining-room clock, in massive black marble setting, inlaid with malachite, with gilt dial. On the base of the clock is a gilt plate bearing the following inscription:—"Presented to William Watson Dove, Assistant Medical Officer of the Somerset County Lunatic Asylum, by the officers, attendants and servants, in token of their respect and regard. May, A.D. 1876."

WALSALL.—At the last quarterly meeting of the Walsall Town Council the expediency of adopting the Artisans' Dwellings Act, 1875, in the borough was urged by the Mayor, on the ground that a deplorable state of things existed in certain parts of the town which was a disgrace to its authorities. The accumulation of filth in over-full middens was described as so great that the medical officer

BEST COPY AVAILABLE

hesitated to order their being emptied, fearing to cause an outbreak of disease. An alderman expressed his inability to understand how people could live "amid such deplorable surroundings." A block of seven houses was mentioned that was without any closet accommodation. After a discussion which seemed to promise that this state of things would not be lost sight of, the matter was referred to the General Purposes Committee.

CONVICTION OF AN UNQUALIFIED PRACTITIONER.—At Carnarvon, a few days ago, R. J. Owen was summoned under the 40th section of the Medical Act for having "unlawfully, wilfully, and falsely used the name of a surgeon." Mr. Allanson, who prosecuted, said that the defendant had for three months been in the service of Dr. Hughes, of Llanberis. Although not a qualified man, he had since started a practice at Llanberis. On May 3rd, a certificate of the death of a child, signed "R. J. Owen, surgeon," was given to the district registrar of births and deaths, and, upon that misrepresentation, the present proceedings were taken. Mr. C. A. Jones, on behalf of the defendant, contended that there had been no wilful misrepresentation, the defendant having used the title "surgeon" as a matter of courtesy. A fine of £5 and costs was imposed, and the Bench declined to grant a case.

Medical Appointments.

BROWN, A., M.B., C.M., late House-Surgeon, has been appointed a House-Physician to the Glasgow Western Infirmary, vice Sewell, resigned.

BRUCE, R., M.R.C.S.E., L.S.A.L., has been appointed Junior House-Surgeon to the Birkenhead Borough Hospital, vice Wilding, resigned.

CLARKE, R. H., B.A., M.R.C.S., has been appointed a House-Surgeon to the Glasgow Western Infirmary, vice Miller, resigned.

COLLINS, H. M.R.C.P.Ed., M.R.C.S.E., L.S.A.L., has been appointed Medical Officer and Public Vaccinator for No. 3 District of the Dursley Union, Gloucestershire, vice Joynes, resigned.

COX, W. A., M.B. Univ. Ed., L.R.C.P.L., M.R.C.S.E., has been appointed Medical Officer and Public Vaccinator for the Aylestone District of the Blaby Union, Leicestershire, vice Fullagar, deceased; and a Medical Officer to the Leicester Provident Dispensary, vice Pike, resigned.

DUTT, B. L., M.B., C.M., has been appointed Assistant Medical Officer to the Somerset County Lunatic Asylum, Wells, vice Dove, resigned.

FLEMING, J., M.D. Queen's Univ. Irel., L.R.C.P.Ed., has been appointed Medical Officer, Public Vaccinator, and Registrar of Births &c., for the Bellarena Dispensary District of the Limavady Union, vice Lane, resigned.

FLEMING, W. J., M.B., has been appointed Lecturer on Physiology in the Glasgow Royal Infirmary School of Medicine.

GIBBS, B., L.R.C.S.Ed., L.R.C.P.I., has been appointed Medical Officer, Public Vaccinator, and Registrar of Births &c., for the Coolock and Drumcondra District of the North Dublin Union, vice Elliott, resigned.

GOODWIN, R. D., F.R.C.S.E., L.S.A.L., has been re-appointed Medical Officer of Health for the Southern Sub-district of the Ashborne Rural Sanitary District at £10 10s. per annum.

GOWANS, J., M.B., C.M., has been appointed a House-Physician to the Glasgow Western Infirmary, vice Owen, resigned.

GUTHRIE, T. O., M.B., C.M., has been appointed a House-Surgeon to the Glasgow Western Infirmary, vice Brown, resigned.

HETLEY, H., M.B. Univ. L., M.R.C.S.E., L.S.A.L., has been appointed House-Surgeon and Apothecary to the Leicester Infirmary and Fever House, vice Hodges, resigned.

HOPKINS, H. C., L.R.C.P.Ed., M.R.C.S.E., has been appointed Pathological Registrar to the Royal United Hospital, Bath, vice Barter, deceased.

JACOBSON, W. H. A., M.B. Oxon., M.R.C.S.E., has been appointed fourth (additional) Assistant-Surgeon to Guy's Hospital.

LEE, P., M.R.C.S.E., has been appointed Surgeon Superintendent (third time) to H.M. New Zealand Government Emigration Service.

LLEWELYN, T., M.D., has been appointed Honorary Physician to the Royal Academy of Music, Hanover-square.

MACLAREN, J., L.R.C.S.Ed., Senior Assistant-Physician, Royal Edinburgh Asylum, has been appointed Medical Superintendent of the Stirling District Asylum, vice F. W. A. Skae, M.D., resigned, on his appointment to a Commissionership in Lunacy for New Zealand.

MCLEAN, A., M.B., C.M., has been appointed Medical Officer and Public Vaccinator for the Parish of Uig, Island of Lewis, vice Mackay, resigned.

MIDDLETON, G. S., M.A., M.B., C.M., has been appointed a House-Physician to the Glasgow Western Infirmary, vice McCalman, resigned.

MOFFATT, R., M.B., C.M., has been reappointed a House-Surgeon to the Glasgow Western Infirmary.

MOODY, J. M., M.R.C.S.E., has been appointed Junior Assistant Medical Officer to the Brookwood Lunatic Asylum, vice Thomson, resigned.

MYRTLE, A. S., M.D., has been appointed President of the Leeds and West Riding Medico-Chirurgical Society for the ensuing year.

SMAILES, T., M.R.C.S.E., has been appointed Medical Officer of Health for the South Crosland Urban Sanitary District.

SPICER, R. H. S., M.D. Univ. St. And., L.R.C.P.Ed., M.R.C.S.E., has been appointed Medical Officer and Public Vaccinator for No. 3 District of the South Molton Union, vice Robinson, resigned.

TWIGGE, T. N., M.R.C.S.E., has been re-appointed Medical Officer of Health for the Northern Sub-district of the Ashborne Rural Sanitary District, at £10 10s. per annum.

WALES, J. A., L.S.A.L., has been appointed Medical Officer for No. 4 District of the Pontefract Union, vice Lomas, whose appointment has expired.

WISE, A. T. T. M.R.C.S.E., L.S.A.L. has been appointed House-Surgeon to St. Mary's Hospital, Paddington, vice Cundell, appointed Medical Officer for the Kew District of the Richmond Union.

Births, Marriages, and Deaths.

BIRTHS.

COGHILL.—On the 20th inst., at Ventnor, the wife of John George Sinclair Coghill, M.D., of a son.

DUDGEON.—On the 11th inst., at Broomhill, Dennistoun, the wife of John Dudgeon, M.D., of Pekin, of a son.

GAMGEE.—On the 16th inst., at Portland-crescent, Manchester, the wife of Arthur Gamgee, M.D., of a son.

HARRIS.—On the 13th inst., at Darnley-road, Hackney, the wife of Robert Harris, M.B., of a son.

LANCHESTER.—On the 17th inst., at Park House, Croydon, the wife of Henry T. Lanchester, M.D., of a daughter.

PLASKITT.—On the 12th inst., at Chapel-street, Belgrave-square, the wife of Joshua Plaskitt, F.R.C.S. Eng., of a daughter.

ROOME.—On the 13th inst., at Parkhurst, Isle of Wight, the wife of Henry Roome, M.D., of a daughter.

MARRIAGES.

HOOPER—GILES.—On the 18th inst., at St. John's, Richmond, by the Rev. W. Hales, M.A., Vicar, Alfred Hooper, M.R.C.S. E. L.S.A. L., of Newhall, Burton-on-Trent, to Helen Louisa, elder daughter of the late William Giles.

LUSH—SCHOLFIELD.—On the 6th inst., at St. Mary Magdalene, St. Leonard's-on-Sea, William J. H. Lush, M.R.C.P. Edin., to Katherine Martha, daughter of the late John Scholfield, Esq.

MURRAY—FRASER.—On the 20th ult., at St. Paul's, Landour, John Ross Murray, M.D., Army Medical Department, to Jessie Maria, daughter of Surgeon-Major Archibald Henry Fraser.

REITH—TYTLER.—On the 18th inst., at Aberdeen, Archibald Reith, M.D., to Annie Grace, daughter of R. B. Tytler, Esq.

DEATHS.

CHADWICK.—On the 3rd inst., at Southport, Samuel Taylor Chadwick, M.D., aged 66.

CLARKE.—On the 7th inst., at Poulton-le-Fylde, Thomas Clarke, M.R.C.S. Eng., aged 37.

DAVIDSON.—On the 12th inst., at Gloucester-crescent, John Davidson M.D., aged 75.

DENNIS.—On the 3rd inst., at Buckingham Palace-road, Wm. Dennis, M.D., aged 70.

HALL.—On the 6th inst., at Birch-lane, Longsight, Manchester, Robert Hall, L.R.C.S. Edin., aged 60.

HUTCHINSON.—On the 7th inst., at Bromley, Kent, John Hutchinson, M.R.C.S. Eng., aged 66.

MALLORY.—On the 12th inst., at Stanhope, Durham, Henry Leigh Mallory, L.R.C.P. Edin., aged 35.

MILNER.—On the 9th inst., at Lower Belgrave-street, Wm. Milner, M.R.C.S. Eng., aged 57.

MORRIS.—On the 4th inst., at Plaistow, Essex, Ellis Jones Morris, L.F.P.S. Glasg., aged 54.

POLLOCK.—On the 18th ult., at Philipstown, Dundalk, co. Louth, William Pollock, M.R.C.S. Eng., aged 60.

RENDLE.—On the 15th inst., at Plymouth, Edmund Rendle, M.D., aged 75.

TODD.—On the 9th inst., at Dysart, Robert Todd, M.D., aged 68.

UNWIN.—On the 15th inst., at Fernlea, Surbiton-hill, John Baggett Unwin F.R.C.S. Eng., aged 65.

WATERHOUSE.—On the 29th ult., at Bolton, Frederick Waterhouse, L.R.C.P. Lond., aged 33.

WHITTON.—On the 5th inst., at Wolverton Manor, Corbett Whitton, M.D. aged 56.

[N.B.—*A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.*]

Notes, Short Comments, and Answers to Correspondents.

TREATMENT OF DIPHTHERITE.

IN the last number of the *Gazzetta Medico di Roma*, Dr. Cesare Ciattaglia gives an instructive communication on the cure of diphtherite. For some little time he has been wholly successful in treating that ordinarily stubborn malady—his remedies being the chlorate of potash internally, and the application of the hydrate of chloral to the false membranes. With these he has combined a tonic and restorative diet. To children of three to six years of age he has administered the chlorate of potash in doses varying from 10 to 15 grammes a day dissolved in 140 of water; while the hydrate of chloral, in the proportion of 4 grammes of the hydrate dissolved in 20 grammes of glycerine, is painted over the diphtheritic patches three or four times a day. For adults the dose of chlorate of potash is 20 grammes. The *catena* of evidence by which he illustrates this treatment is very convincing—one gratifying observation being the certainty with which the hydrate of chloral and glycerine, from the moment of being smeared on the false membranes or diphtheritic patches, arrested their formation, and removed entirely on the first or, at latest on the second, day the offensive and characteristic fetor. Dr. Cesare Ciattaglia, of course, disclaims all pretension to originality in this treatment. It is to Vogel that we are indebted for the use of the chlorate of potash—a remedy which that distinguished German physician employed for the first time in 1860; while the Italian practitioner, Ferrini, suggested and prescribed the painting of the false membranes with hydrate of chloral and glycerine in the diphtheritic epidemic that ravaged Tunis last year

RURAL WATER-SUPPLY.

At a recent meeting of the Yorkshire Association of Medical Officers of Health, Dr. H. Franklin Parsons, of Goole, read a practical paper on the important subject of "Rural Water-supply." One of the principal objects of the paper was to call attention to the insufficient power which is conferred upon sanitary authorities by the Public Health Act of 1875 with reference to the provision of a wholesome water-supply in districts where no public water-service exists. Dr. Parsons very reasonably urges that "as a house may not lawfully be built in an urban district without proper means of drainage, neither should one be built in any sanitary district, rural or urban, unless properly supplied with water," and proceeds to point out how section 62 of the Public Health Act, 1875, might easily so be amended as to afford compulsory powers for furnishing a supply of water to any house not so provided, "if, on the report of the surveyor, it appear that such a supply can be furnished thereto at a reasonable cost." It is further suggested that section 70 should be amended so as to give to the "Court of Summary Jurisdiction" power to order the provision of a supply of pure water in the place of an impure one, which the Court may order to be closed. The reading of this paper was followed by a discussion which resulted in the adoption of a petition to Parliament, signed by the medical officers of health of Yorkshire, embodying the principal suggestions contained in Dr. Parsons' paper. The evils resulting from an impure water-supply are perhaps as severely felt in the mining and manufacturing villages of Yorkshire as in any other part of the United Kingdom, and it can only be hoped that this petition from the local medical officers of health will meet with the consideration it deserves.

Mr. E. Thos. Johnson.—We think the best course would be for our correspondent to advertise. There are many institutions of the sort from which selection might be made.

Mr. F. White, (Dublin.)—We never recommend a particular surgeon.

TREATMENT OF LUNACY IN AMERICA.

To the Editor of THE LANCET.

SIR,—I have received the following letter from Dr. Ray, of Philadelphia, with permission to make any use of it I like. It seems to me that your columns are the best destination for it, considering how much matter relative to the hospitals for the insane in America has appeared there. I think it is due to this veteran alienist that he should have an opportunity of expressing and defending the views conscientiously held by himself and his fellows.

Yours &c.,

South-parade, Bath, May 18th, 1876. D. HACK TUKE.

3509, Baring-street, Philadelphia, April 29th, 1876.

MY DEAR DR. TUKE,—I am sure we are greatly indebted to yourself and Dr. Bucknill for vindicating our brother craftsmen. You are obliged to admit that we still adhere to mechanical restraint, and we willingly plead guilty of all the sin implied in that admission. To this question of restraint or non-restraint I cannot accord the importance with which it is regarded on your side of the water. There are many things connected with the care of the insane far more important than this, as it seems to me, and far more worthy of engaging our deepest interest. To me the practical difference between no restraint at all and restraint in two or three per cent. seems too small to be a matter of much discussion; at any rate I am sorry to see it discussed as it sometimes is. It is a scientific question to be studied and discussed in the spirit of a strictly scientific inquiry, and our conclusions, whatever they may be, should furnish no occasion for excited feeling, nor assumptions of superior skill or humanity. That a hospital may be conducted without mechanical restraints nobody doubts, and we could do it here if we pleased; but the *fact* would not settle the question any more than it does with you. It being admitted that some form of restraint may be necessary, personal or mechanical, their respective merits must be determined solely by the results. The object in view I suppose to be, not to promote a little national jubilation over the success of a theory, but the highest welfare of the particular individual patient. How far this point is secured can be ascertained, not by walking through the wards once, twice, or thrice, and seeing whether any or how many are restrained, but by learning the circumstances of each particular case under restraint, or supposed by the advocates of restraint to need it, and following it through its successive stages. To say that you use no restraint is simply to affirm a negative fact, implying only the exercise of your own will. What I want to know is, how far this non-restraint is chargeable with the casualties that happen more or less in every hospital—the suicides, homicides, broken ribs, elopements, black eyes, and bruised faces. To determine this point exactly is beyond our power; therefore it must be left to every superintendent to reach as near it as he can by impartial, faithful observation. Here it has happened that every one of them has arrived at the conclusion that in a small number of cases the ultimate welfare of the patient is promoted by the judicious use of restraint. It seems a more efficient and less irritating mode than the hands and eyes of attendants. You, on the contrary, believe that such restraint is, on the whole bad and inhumane, and, therefore, never to be used. If the truth lies with you, I am sure that our men will accept it at last; for with their spirit of inquiry, unbiased by the fear or favour of outside parties, it is only a matter of time when they shall reach it. Until then they will necessarily believe that they are right, and you are wrong. I am not going to trouble you with any discussion of the reasons they give for their belief; for I suspect that everything which can be said on the subject has been said already over and over again; but facts are turning up now and then, the significance of which cannot be mistaken. For instance, we have always held that in certain cases attendants, without restraint, are not thoroughly reliable, and that in such cases we have no right to run the risks which such unreliability implies. The fact itself is strongly revealed in one of your journals, which I looked over the other day (*Journal of Psychological Medicine*, October, 1875). In an article by Dr. Davey, called, I think, "Reminiscences of Lunacy Practice," is related the case of a suicidal patient, who succeeded in hanging himself, though placed in the charge of two attendants, having no other duty but that of watching him. The case of Lord Lyttelton, in the papers last week, shows the same thing. Another case, having the same moral, is related at some length by Dr. Davey. I refer to the old lady, neither violent nor excited, who would fall out of her chair and bruise her face, though under the charge of relays of attendants. Indeed, his narrative of this case tells the whole story in a single page about non-restraint, according to my apprehension. He finally secured his patient from any further harm by passing a shawl around her body and the back of the chair; but some outside functionaries, hearing of the fact, charged the doctor with barbarism, made him remove the shawl, and allow the poor old lady the liberty of tumbling out of her chair and bruising her face. This case, I say, illustrates to me the whole story of non-restraint. It shows the inefficiency of attendants, the dependence of superintendents on others rather than themselves, and the senseless tyranny of outside boards. We cannot help asking how far this may be taken for a representative case of a considerable class of cases; for there are other statements in the above article that imply that non-restraint is not universally favoured in England.

I have never yet heard a plausible reason why, non-restraint being the right thing—the outcome of the greatest skill and the greatest humanity,—our superintendents should not have discovered and practised it. They are as ambitious of excellence as yours are; they rejoice as much in the comfort of their patients, and their attendants are as intelligent and as numerous. The proportion of attendants to patients in the M'Lean Asylum has been for years about one of the former to one and a half of the latter, and during the period that I had charge of it very few of the female attendants slept in their own rooms. In this matter, my dear Sir, I think we are wiser than you are. We rely on attendants alone until we find such restraint no longer safe or sufficient, and then, not having any fear of Lunacy Commissioners or newspaper censure, we resort to canvass and leather.

I observe that the idea is sometimes expressed among you that we stand in need of a Board of Lunacy, something like yours, I suppose, and the idea is occasionally started here, but not by hospital men. The promoters of the notions here are generally, so far as I have observed, those who would rejoice to serve their country in this capacity, provided a good salary were attached to it. The general Government could not create such a Board as yours, and no State has thought it warranted by the few establishments within its territory. In a few States, at the instance of some silly women and sillier men, who imagine that half the inmates of our hospitals are not and never were crazy, a Board has been appointed, with functions having reference chiefly to this supposed fact. They have done so many foolish things already that other States will not be likely to adopt the institution. I regard it as one of the felicities of our situation that we are exempt from Lunacy Commissioners, and that thereby our hospital men are left free to work out the problem of restraint, as well as all others connected with hospital management, without asking permission of outside authorities; and it will be long before they arrive at the conclusion that a body of men taken from the ordinary walks of life—lawyers, merchants, country squires,—never, very likely, having seen an insane man in their whole lives, are pre-eminently capable of teaching them their duty. If we are to be denounced for our independence and freedom of inquiry, we shall endeavour to imitate the poor Publican rather than the Pharisee. Nor, when told that we are guilty of barbarous practices in that we sometimes put restraint upon the limbs, will we retort the charge with sevenfold vehemence that people are bruised and maimed and killed in your hospitals for lack of a little restraint judiciously used.

I intended while speaking of restraint to advert to Dr. Bucknill's complaint, made in one of his papers, that our superintendents would not study the non-restraint system as practised in your hospitals, and that he had met only two (and they were not superintendents) who had investigated your "system." He actually met several, myself for one, and if he did not know it, it was for lack of inquiry. The matter was much agitated when I was in England, and I studied it as closely as a mere negation can be studied. Dr. Bell and some half-dozen others might say the same. If our system had been observed by a tithe of the number among your hospital men as it should be observed, I am sure it could not fail to meet their approbation. Dr. B. says that in Dr. Kirkbride's hospital of 200 patients he found not one under restraint, though Dr. K. strongly advocates its use. Can there be stronger proof that when used it would be because of its superior efficiency? Do men resort to exceptional ways, except under the pressure of necessity?

This, you know, is our Centennial year. One of its events is to be a grand International Medical Congress, in which our craft will be represented. We hope to see many of your hospital men, who must not wait for a special invitation, for all will be welcome. If they will stay long enough, I will engage that they will become converts to our "system" of restraint!

Pardon this unconscionably long epistle, and believe me,

Yours truly,

Dr. D. Hack Tuke. J. RAY.

*** It will be convenient to deal with this letter when, Dr. Bucknill's series of papers being "concluded," we can sum up the whole case.—ED. L.

"NOTES ON FIJI."

WITH reference to a paragraph which appeared lately in our columns under the above heading, Dr. Messer, Staff Surgeon, R.N., now on the Australian station, writes to us to say that he has never seen or heard of a case of delirium tremens following kava drinking in our newly acquired possession.

Observer.—We regret to hear that two members of the Bethnal Green Board of Guardians have written to the Local Government Board, making charges of a trivial nature against the medical officer of the workhouse. The proceeding is most irregular. The complaint should have been brought before the Board of Guardians. Some of the members of public bodies who decry centralisation, and are never weary of extolling the blessings of local self-government, are singularly inconsistent in their actions. We thought the Bethnal Green Board already chafed under a sense of usurped privileges.

BEST COPY AVAILABLE

WORKMEN'S DWELLINGS IN NEWCASTLE-UPON-TYNE.

THE health of Newcastle-upon-Tyne, estimated by its death-rate, showed a marked improvement in 1875, compared with that which prevailed in the two preceding years. The death-rate, however, was equal to 30·1 per 1000, against 19·5 per 1000 in Portsmouth; and the rate of infant mortality, measured by the proportion of deaths under one year of age to births registered, was 187 per 1000 in Newcastle, against 133 in the southern port. Such facts afford conclusive evidence that the sanitary condition of Newcastle is still far from satisfactory. The last Annual Report of the medical officer of health to the borough (Mr. Henry E. Armstrong) refers pointedly to the necessity for the application of the provisions of the Artisans' Dwellings Act of 1875 to some parts of the town, the condition of which undoubtedly operates against any permanent or considerable further reduction of the death-rate at all ages or of infants. Overcrowding in towns cannot be seriously reduced so long as the supply of dwellings for the working classes is insufficient. Although no active steps have yet been taken to apply the above-mentioned Act to the necessities of Newcastle-upon-Tyne, the Mayor appears to be convinced of the scarcity of labourers' dwellings, and is supporting the utilisation of a portion of Nun's Moor in order to supply the manifest deficiency.

Dr. Blaisthorpe.—We believe it will appear in a few days; but our correspondent had better apply to the Local Government Board.

Senex.—There is no canon. The practice varies. The best thing to do is to find out the custom of the place, and act accordingly.

L.R.C.S.—He could not recover fees for surgical attendance.

TRIMETHYLAMINE IN ACUTE RHEUMATISM.

To the Editor of THE LANCET.

SIR,—The notice of the profession being now directed to the treatment of acute rheumatism by salicin and other remedies, the following five cases, showing the effects of trimethylamine may not be uninteresting. Acute rheumatism as well as acute gout are indeed "surprised by propylamine." Propylamine and trimethylamine are one and the same thing in the English market, the only difference being the label; their chemical properties are nearly allied, and both are obtained from herring-brine, propylamine being the commercial article. It was first used on the Continent by Pargier-Lagrange, and brought under the notice of the profession in this country by Dr. Spencer, of Bristol, in the treatment of rheumatism and gout. Its *modus operandi* is not very clear, but it is thought to be on account of its alkaline properties. There can be no doubt now that it reduces the temperature, diminishes the pulse, and removes the pain in acute rheumatism and gout, and that in a very short time—from six to thirty-six hours after its use. The more *acute* the disease, the more marked is the effect of the remedy. In chronic cases I have found little or no benefit from it, at least not so much as from potash and colchicum. Since I commenced the use of the remedy I have only had the opportunity of trying it in five acute cases, in all of which I have found its action more speedy and more certain than even quinine in ague. I will not trouble your readers with details of the cases, but will content myself with giving a brief summary.

CASE 1.—A man, aged fifty, had several attacks during the last few years of acute and chronic gout, the one preceding the present laying the man up for seven or eight months. The present attack was subacute in its nature. Temperature 100°; pulse 90. Swelling first in left foot and then in both wrists, with great pain. Took four minims of trimethylamine with a little carminative every four hours. Next day rather easier, but had to continue the medicine for a week before he was quite free of pain. For the resulting weakness he took iron and quassia, and in a few days after went to work. He said he never got over an attack of gout so quickly.

CASE 2.—Was somewhat similar in its nature, but more acute. Temperature 101°; pulse 110; light-headed at night. There was also a heart-complication—aortic obstruction,—from which he has since died. He suffered for seventeen weeks a year ago from acute rheumatism. He had now acute pains, with swelling, in both ankles and wrists, also pains in chest; looked pale and delicate. Gave four minims of trimethylamine every two hours. Eighteen hours after the first dose felt much freer of pain and otherwise better, the temperature and pulse having diminished. Altogether he took two drachms of the trimethylamine, when I ordered quinine and iron, on which he slowly got stronger, only now and again complaining of muscular pains in the arms.

CASE 3.—R. M——, aged forty. Regular attack of rheumatic fever; all the joints painful and swollen. Temperature 102·6°; pulse 120. Had been under treatment a week before I saw him, but daily getting worse. I at once ordered four minims of trimethylamine every two hours, and at my visit next day found him perfectly free from pain, only tender when touched, and all the other symptoms equally relieved; the tongue, from being thickly coated the day previous, was almost normal. I now prescribed quinine, and the next day he was sitting up in a blanket, but said he caught cold from sitting too near a window, and the day after he had a relapse. He again took the trimethylamine for twenty-four hours, and had no return of the pains. In a week from the time I first saw him, in spite of the relapse, he was quite well, and went to business.

CASE 4.—Somewhat similar to last, only not so much fever. He was ill for a week before he commenced the trimethylamine, the symptoms daily becoming more aggravated. Twelve hours after taking the trimethylamine he "felt like another man," as he himself expressed it. He took two drachms of the drug, followed by tonics, and a fortnight after I first saw him he went to work.

CASE 5.—A child, aged eight. Had rheumatic fever twice before, the last attack twelve months ago. Had been ill a week, and getting worse, when I saw him. Tongue furred; light-headed at night; pains in knees and fingers, with slight swelling. Temperature 101°; pulse 120. Two minims of trimethylamine to be taken every two hours. Next day said to be better, but more pain in the joints. Temperature 100°; pulse 110. Ordered three minims of trimethylamine every two hours. Next day better; pains all gone. Temperature 99·6°; pulse 110. Detected a slight mitral obstructive murmur to-day. Ordered compound syrup of phosphorus, which brought back the appetite, and he gradually improved. His mother said his previous attack lasted for two months. The heart mischief seemed to be recent, and still continues.

Yours truly,

Sloane-street, May 1st, 1876. JOHN DEWAR, L.R.C.P. Edin., &c.

OSTEOTOMY OF THE FEMUR.

THE patients who were exhibited at the meeting of the Clinical Society on May 12th and at the Harveian on the 18th, to illustrate Mr. Maunder's paper on Osteotomy, had been individually submitted to section of the femur by means of *three* chisels, as suggested by Volkmann, of Halle. On the former occasion Mr. Maunder showed a chisel (a Carver's, three-eighths of an inch wide), which he expected would supplant the use of the three of different pattern. His expectation has been fulfilled in the case of a male adult submitted to the operation on May 17th. The bone was readily divided, and no method could be more simple nor occupy less time. The straightforward action of a chisel would seem to be less likely to damage structures than the repeated to-and-fro movement of a saw. There would also be no débris.

Mr. Latimer Clark is thanked. We regret we cannot find the necessary space.

"A FATAL HOUSEHOLD EPIDEMIC."

A CORRESPONDENT in Liverpool takes exception to a statement in our annotation last week under the above heading, and requests us with some vehemence to publish an extract from a letter he has received from Mr. M'Ardle, the unfortunate Town Councillor, with whose terrible bereavement we truly sympathise. It appears that in a space of three weeks Mr. M'Ardle lost *seven* out of nine members of his family. He is now away recruiting his health, and we are asked, "in justice to Mr. M'Ardle and of the two surviving members of his family," to insert the following extract to which we have referred:—

"I read with anxiety and a great deal of pain this morning Saturday's *Albion* sent to me, containing a copy of an article from THE LANCET. I clearly see it has emanated from and is inspired by some official of the Municipal Office in connexion with the Health Committee.

"Now I cannot for the life of me make out how it is they don't declare to the Health Committee that when they came to test and flush the drains, the landlord's man had been there the day before, and in my presence, opened the drains, and found the pipes in a frightful state, and the green, putrid matter lodged in them (the collection of years) was so offensive that he parted with his breakfast. He laid down at once new pipes. This I explained to the two men who flushed the drains, and to Mr. Fitzpatrick (the health inspector) afterwards, who said he was not aware of this fact, when he told the Committee they found very little wrong with the drain-pipes, except a stoppage in the garden. I told him it was unlikely they could find much wrong when the landlord had put new drain-pipes down the day before they came to test. This must be brought out publicly. I want to fix the cause of the malignant disease. I know the cause, and it must not be kept back from the Corporation by any official, no matter how high his position. On public grounds it must be sifted.

"I intend writing to the Chairman of the Health Committee for Thursday next, as no clothes from either the sick or dead were washed at home. They were always thoroughly disinfected and washed in carbolic acid some miles from my home, and the first intimation I had of any neighbour's complaint was from THE LANCET. Surely if one had been lodged, I had a right to know it before it was sent to a newspaper.

"Again, as to calling to disinfect, the whole house was properly disinfected by fumigating sulphur in the rooms, made air-tight for forty-eight hours, where sickness had been, and a large quantity (every few hours) of carbolic acid in every part of the house from the commencement of the disease. This was done prior to the official calling to do it, who said, when he heard what had been done, it was quite sufficient. Besides, when he did call, some were ill with measles and others had symptoms of diphtheria, and no disinfecting could be gone on with then."

H.—Any witness in any case who is prepared to say that the taking of an oath is in his religious belief unlawful, is entitled to give testimony on affirmation only, and the penalties of untrue testimony given on affirmation are just the same as those which follow perjury. If the above assertion as to religious belief cannot be made, the oath must be taken with the usual formalities.

Dr. Osler's (Montreal) paper shall be published in the form of an original contribution.

"REVACCINATION OF SMALL-POX NURSES."

To the Editor of THE LANCET.

SIR,—We notice in your number of May 13th, under the above heading, an allusion to a patient who lately died of small-pox in the Leeds Hospital under circumstances which, had your report been a correct one, would have fairly laid us open to the censure implied in the concluding portion of your comments on the case.

The woman to whom you allude was engaged as general servant (not as nurse, as you state) by the manager of the hospital, her duty being to attend solely to the private apartments, which are quite distinct from the wards. The rule that all nurses and servants shall be revaccinated when appointed had been, we believe, invariably acted upon up to that time; but this poor woman, when urged by both the manager and his wife to submit to the operation, pleaded for a little delay, as she was then suffering from soreness of one of her eyes. She was unfortunately allowed to remain unvaccinated, and we, the medical officers, were kept in ignorance of the fact that a fresh servant had been engaged. At the end of six weeks she suddenly left without giving notice, and went to live with a woman who had only been discharged from the hospital a few days before, the two occupying the same bed. In fourteen days she was brought here with incipient small-pox, which soon assumed a virulent form, and eventually caused her death.

Much as we regret the unfortunate event, we think this plain statement of facts will tend to remove the impression conveyed by your remarks—viz., that the death was due to a systematic neglect on the part of the authorities of one of the most important rules which can be laiddown for the management of an institution of this kind. That rule has, with this one exception, been carried out here with the greatest success, and will in future be still more strictly insisted upon.

We are, Sir, your obedient servants,

May 16th, 1876. THE MEDICAL OFFICERS OF THE LEEDS SMALL-POX HOSPITAL.

Mr. James Muir, "the representative of the discoverers," writes to us from Edinburgh that "a new discovery has been made in the law of disease which is of such importance as transcends all belief." "It is now known what is the origin and cause of all the diseases which have ever afflicted humanity." Statues should be erected at once in honour of the discoverers, and we are sure that in Edinburgh funds for the purpose will be immediately forthcoming. Meanwhile a sceptical Government to whom the discovery was submitted in October last has made no sign.

THE paper of *Dr. Otis* (New York) on the "Treatment of Stricture of the Urethra and Gleet" shall appear next week.

THE WORKING OF THE CONTAGIOUS DISEASES ACTS.

To the Editor of THE LANCET.

SIR,—The tables of statistics put forward both by promoters and opponents of the Contagious Diseases Acts are frequently so bewildering to ordinary minds that they are cast aside without examination, and the statements of those who frame them are taken for granted, whatever may be the opinions they are wanted to produce.

A statement of facts with regard to the working of the Acts amongst us in Gravesend, if unencumbered by tables, may perhaps be interesting to some, and may also be useful in the unsettled state of public opinion.

We have on the books here a number of women, varying from thirty-five to forty, somewhat under half of whom are required to come up weekly for inspection. This, of course, represents the number of public prostitutes only. The behaviour of these women has been uniformly good. There has never been the slightest repugnance shown by any to examination. During my two years of office I have known girls come into the district from Warley and elsewhere to present themselves for examination; but I never once heard or saw any unwillingness to submit to it on the score of modesty from a single patient. A few object to the trouble it gives them of getting clean clothes and of regularity of hours, but never from any other cause. No officer here has ever been found overstepping the limits of his duty. In the last four months I have been obliged to send only one woman to hospital for decided disease, and either three or four others as doubtful cases, whose detention has only been for a short period.

In private practice here I rarely see a case of syphilis either in men or women, certainly not contracted in the town. In conversation with other medical men, I hear their experience is nearly the same. At all events the amount in the last few years is very much lessened. The chemists, who used themselves to treat a great many venereal diseases, make a similar statement.

Our barracks contain a variable number of soldiers. I believe the average to be about 600. Since June 17th in last year there have been in the Military Hospital no more than three cases of disease; one only of these is ascribed to Gravesend; the other two were contracted before the men came here. When we take this last statement into consideration, and recollect that, though not exactly a port, yet that vessels are always passing and repassing on the river, and that they are often detained here for a day or two, we may fairly give credit to the Acts and to their repressive and protective powers for much of this freedom from a horrible scourge.

To those who would accuse us, as they often do, of bringing up for examination women who are only suspected of prostitution, we reply that nothing of the sort ever takes place. It is necessary to be certain of their character before they are summoned to attend; and though there are now and then cases where the suspicion is very strong, yet the Acts are never put in force against them till certainty exists. To such as publicly commit themselves we say, "We are powerless to prevent you exercising your calling if you will persist in doing so; but we can, and will, to a certain extent, prevent your becoming the source of irreparable mischief to infants and unoffending victims." All this takes place quietly and decorously in a secluded part of the town, and the next-door neighbours cannot and do not complain of it as offensive. If any part of the system can possibly be called objectionable, it is well counterbalanced by results. How much better the state of things at present than some years ago, when nothing prohibitory was in force! Surely opposition arises from ignorance, and from ignorance only.

I may here, perhaps, say a word on vaccination, the opposition to which has the same source. We still find, even in the profession, some wrong-headed opponents to this blessing, notwithstanding the positive statements of the medical officers of small-pox hospitals and Government inspectors. Eighteen cases at least of the disease have occurred here within the last few months: fourteen cases have been amongst vaccinated individuals, and they have all recovered. Four have been unvaccinated: two of these are dead; one other has had the disease as severely as it was possible; one only has had it mildly. So much for perversity.

I remain, Sir, yours truly,

J. H. GRAMSHAW, M.D.,
Examining Surgeon, C.D.A., and Medical Officer of Health for Gravesend.

May, 1870.

M.D., M.R.C.S., L.S.A.—Either an examination must be passed in the usual subjects, or a special dispensation to practise on the strength of the English qualifications be obtained from the Government of the country.

Mr. Barwell.—Soon.

EPSOM COLLEGE.

To the Editor of THE LANCET.

SIR,—Many of your readers take an interest in the Medical College at Epsom, and may like to know that Frederick Baylis, one of its pupils, was elected by open competition in March last to a junior studentship in Natural Science at Christ Church, Oxford; and that in April another pupil, Arthur Cutfield, has virtually gained by open competition two Natural Science scholarships—one at Queen's College, Oxford; the other at Christ's College, Cambridge. After election to the latter, which is of the value of £90 a year, he was allowed to compete for the former, the value of which is £90 a year; but before the award was made known, he had decided, for private and personal reasons, to go in any case to Cambridge, and withdrew his name from the candidates at Queen's. A letter from the Provost, however, declares that he would have been otherwise elected. It may be interesting to state further that both these boys matriculated at London University in Honours: Baylis in 1874, and Cutfield in 1875, the latter being placed third on the list; and that Baylis has also passed the First B.Sc. of London University in the first division.

Yours &c.,

W. DE LANCY WEST,
Head Master.

The College, Epsom, May 4th, 1876.

Foreigner.—We do not see any insuperable barrier to "a coloured man with very good qualifications, honour certificates, and testimonials," securing a public health appointment in England. There is, however, an absurd prejudice against colour among Anglo-Saxon peoples, from which some nations, and we would particularly instance the French and Spanish, are free. We cannot here go into the other question of ethnology.

Brussels, (St. Mary's.)—We cannot "say its place in rank among others."

THE IMPROPER EMPLOYMENT OF UNQUALIFIED ASSISTANTS.

To the Editor of THE LANCET.

SIR,—Knowing, as a constant reader of your journal, that your pages are always open to causes of just complaint, I would ask your aid on behalf of men in small practice, and of the younger ones especially, who suffer so much from the large employment of unqualified assistants.

After remaining six years at hospital work, and holding several appointments (two as house-surgeon to London hospitals, and one that of house-surgeon to a large provincial hospital), I started in practice in a village of 400 inhabitants. My two nearest medical neighbours live each six miles away. One of them, who has a very extensive practice, as far as one can judge from external appearances, has an unqualified assistant. This gentleman, who for all I know may never have entered the doors of a medical school, or studied disease at the bedside in any hospital, does the same work, or appears to do, as his employer—attends confinements, illnesses slight or severe, vaccinates for the union, and, as medical men, no difference is known by patients between the unqualified man and myself. He does work in villages quite near to my residence that would undoubtedly come to me; for his employer would be unable to do it himself in consequence of the extent of his practice. I suppose he is receiving one of those magnificent salaries which we see offered in the advertisement sheets of the medical journals in return for unqualified services. I saw one last week, £30 per annum and board. I would put a practical question: Why should a medical man be allowed to have an unqualified assistant (except to dispense and keep books) any more than a clergyman should have an unordained student as his curate? I think this injustice may be considered under two headings—viz.: Firstly, the wrong done to men in small practices and junior members of the profession. Undoubtedly the unqualified men prevent the younger qualified ones from obtaining higher salaries as assistants. As far as I can judge, the unqualified assistant seems in much greater request than the qualified. This should not be so. Under the second heading, we may consider the deception practised upon the public. We will suppose a man taken suddenly ill, and sending for his medical man. He is not in; but the unqualified assistant attends, does not recognise the disease, sends medicine, and orders treatment, which may be harmless or positively dangerous. He sees him again on the following day. The patient is no better, but worse. On the third day probably the medical man sees him himself, and then finds that the disease has not been recognised; the wrong treatment pursued; three valuable days lost. The patient dies, and the medical man gives the death certificate. I do not think the wretched assistant so much to blame as his employer. Doubtless there are some unqualified assistants who have acquired a fair amount of practical knowledge; but they are men who have been many years at it, and I am sure they are often much to be pitied, for their lot, as a rule, is not to be envied. What I maintain is that the law never should allow them to enter upon a career which to them is unsatisfactory, unjust to members of the profession, and to the public positively deceitful.

I would not include in the class I have spoken of those who are already students of medicine, and who act as assistants before they can go up for examination.

Your obedient servant,

April 29th, 1876.

A DISGUSTED YOUNG SURGEON.

*** We entirely agree with our correspondent. There is a wide difference between the employment of an unqualified assistant who has commenced medical studies for light and occasional duties of practice, and the employment of such an assistant for systematically doing the gravest duties of medical practice, such as attending midwifery, acute illnesses, vaccinating for the union—which, by the way, we take to be illegal,—&c. &c. Such a system is a great hardship to men who have laboriously qualified themselves to practise, and it undoubtedly deceives the public.—ED. L.

THE BEALE FUND: ADDITIONAL SUBSCRIPTIONS.

Dr. Wilson Fox	£1	1	0	Dr. J. S. Bostock	£1	1	0
Cæsar Hawkins, Esq.... ...	1	1	0	Baroness Rothschild... ...	2	2	0
Dr. Bowman...	1	1	0				

Beta.—Our correspondent's qualifications are ample if he has the good fortune to meet with a County Court Judge who understands the state of the law.

Mr. Barraclough.—The paper was duly received.

THE UNIVERSITIES AND THE REQUIREMENTS OF THE DAY.

To the Editor of THE LANCET.

SIR,—At a recent congregation at Cambridge it was decided that Human Anatomy shall occupy a more prominent place in the examination for the Natural Sciences Tripos; and in the same University, Mr. Skeat is endeavouring to introduce a scheme for a special examination in "English" for the ordinary B.A. degree.

Permit me to suggest that Dublin University should make some movement in a similar direction, and allow its students to graduate in special subjects of study. If the Board does not feel disposed to reintroduce the system of allowing men (as formerly) to proceed to its degree in Arts by showing a competent knowledge of the subjects included in the list of studies for the different Moderatorships, and that without restricting them in time by making it essential that the candidate shall not have "dropped" a year more or other than the Junior Sophister year, it might perhaps think it proper to establish special examinations for the ordinary B.A. degree, under the same regulations as the present examination for that degree, in—1, English Language and Literature; 2, Anatomy, Human and Comparative, with allied subjects, &c. &c.; so as to enable its ordinary students to go out with a competent knowledge of special branches of study, and thus still further adapt the teaching of the University to the growing requirements of the day.

Your obedient servant,

May 17th, 1876.

PROGRESS.

WE observe that the name of "Sir Henry Thompson" appears among the list of gentlemen who drove four-in-hand coaches at the recent opening day of the Coaching Club. None of our readers will confound the sporting knight with Sir Henry Thompson, the surgeon. The four-in-hand driver is Sir Henry Meysey Thompson.

Mr. E. Praeger (Hitchin) is thanked.

Expatriation.—Apply to Moore and Co., 24, St. Mary-axe.

MATERIA MEDICA AND THERAPEUTICS.

To the Editor of THE LANCET.

SIR,—In your leading article on the coming meeting of the General Medical Council in last Saturday's LANCET you state, "It is curious that, up to this time, Therapeutics have been taught only in connexion with Materia Medica," &c. I wish to inform you that the Council of the University of Durham College of Medicine, Newcastle-on-Tyne (I believe in the year 1872) divided the subjects of Materia Medica and Therapeutics into two distinct classes—Dr. Armison giving a course of lectures on Materia Medica during the summer session, and Dr. Humble on Therapeutics, each gentleman lecturing five days a week. All who have listened to the admirable lectures of Dr. Humble will regret to hear that he has been obliged to resign his chair owing to ill-health.

Yours truly,

Sunderland, May 22nd, 1876. ARBOR COGNOSCITUR FRUCTU.

Fiat Justitia.—In a legal sense the candidates may be said to be equally eligible. The qualifications of the first-mentioned candidate are superior to those of the second in respect of the possession of a degree of St. Andrews.

Medicus should advertise for a school for his sons.

H. B.—We do not prescribe.

TRINIDAD.

To the Editor of THE LANCET.

SIR,—If any one of your numerous correspondents who has lately been out in Trinidad will communicate with me, through the medium of THE LANCET, I shall feel obliged.

I am, Sir, yours &c.,

May, 1876. C. B. A.

COMMUNICATIONS not noticed in the current number will receive attention in our issue of the ensuing week.

COMMUNICATIONS, LETTERS, &c., have been received from — Dr. Murchison, London; Dr. Grailly Hewitt, London; Dr. Burdon Sanderson, London; Dr. Dyce Duckworth, London; Dr. Handfield Jones, London; Mr. Barwell, Leicester; Sir C. E. Trevelyan, London; Mr. H. Cartwright, London; Dr. Yeo, London; Mr. Lewis; Mr. Sparrow, Ryde; Mr. Williams, Liverpool; Mr. Eade, Oystermouth; Dr. Mercer, Auckland, New Zealand; Dr. Cowling, Louisville, Kentucky; Messrs. Maclachlan and Co., Edinburgh; Messrs. Stenhouse, Glasgow; Messrs. Young and Postans, London; Mr. Johnston, Edinburgh; Mr. Stainthorpe, Hexham; Mr. L. Thomas, London; Mr. Moody, London; Mr. Damont, Fakenham; Mr. Brown, London; Mr. Harper, Brixworth; Messrs. Kinmond and Co. Leamington; Mr. Blackader, London; Mr. Kelly, Enniscorthy; Dr. Sargent, Shadwell; Mr. Clegg, Bolton; Dr. Deville, Harrogate; Dr. Fleming, Glasgow; Dr. Edis, London; Mr. Gill, Leeds; Mr. Blackburn, Barnsley; Mr. White, Dublin; Messrs. Thomas and Co., Falmouth; Mr. Madby, London; Mr. Fleming, Chatham; Mr. Warr, Eastbourne; Mr. Meldon, Dublin; Mr. Pocock, Dalston; Messrs. Harvey and Reynolds, Leeds; Dr. May, Bow; Dr. Hunter, Devonport; Mr. Johnson, New Farnley; Mr. Budgett, Eastbourne; Messrs. Gray, Dawes, and Co.; Mrs. Beale, Holloway; Mr. Parker, Wootton Bassett; Mr. Lee, Stockwell; Dr. Tuke, Bath; Miss Pabst, Hanover; Mr. Miller, Taunton; Mr. King, Manchester; Dr. Barber, Sheffield; Mr. Rennie, Birkenhead; Dr. Dutt, Wells; Mr. Cleave, London; Mr. Clayton, London; Mr. Goodman, Towcester; Mr. Deane, London; Mr. Farrington, Diss; Dr. Hayward, Whitstable; Mr. Morton, Epsom; Mr. Warner, Haverfordwest; Mr. Charles, Peterborough; Mr. Rouse; Mr. Monsell; Mr. Power; Mr. Tunis, Hereford; Dr. Praeger, Hitchin; Mr. Franklin, Leicester; Dr. Johnston, Creetown; Dr. Jukes, Halifax; Mr. Taylor, London; Mr. Smith; Dr. Middleton, Glasgow; Mr. Maclaren, Edinburgh; Dr. Osler, Montreal; Dr. Cordes, Geneva; Mr. Barraclough, New Wandsworth; Mr. Sagar, London; Mr. Rae, London; Dr. Fergus, Marlborough; The Secretary of the British Medical and Social Science Associations; L.R.C.S.; H. B., Manchester; D. P.; Expatriation; A Cambridge Graduate, B.A.; F. R. H.; M.D., M.R.C.S., L.S.A.; H.; General Register Office, Dublin; Brussels; D. B.; E. P.; House-Surgeon; Enquirer; Nimrod; A. B.; Studens; &c.

LETTERS, *each with enclosure*, are also acknowledged from—Mr. Whitaker, Derby: Mr. Smyth, Kennington; Mr. Dixon, Leeds; Dr. Vardy, Portsmouth; Mr. Walker, Spilsby; Dr. Coleman, Surbiton; Mr. Butterfield, Northampton; Mr. Whidborn, Topsham; Mr. Maycock, Leamington; Dr. Bramhall, Mumbles; Dr. Jones, Burryport; Dr. Eberle, Easingwold; Dr. May, Bow, Devon; Mr. Mackay; Dr. Crombie, London; Mr. Waters; Mr. Hay, Wolverhampton; Mr. Jones, Dowlais; Mr. White, London; Mr. Gray, London; M. C. V., Ealing; Alpha, Sheepshed; X. Y. Z.; Resident Medical Officer, Leeds; M.D., Stoke Newington; X. Y., Sittingbourne; Ion, Pontypool; Veritas; W. B. P., Dedham; Alpha, Mile-end; E. W. P., London; G. C., London; Gamma; H., Sheffield; M.R.C.S., Dover; Fides, Leicester; M.D., Edinburgh.

Welshman, Edinburgh Courant, Manchester Guardian, Western Morning News, Newcastle Chronicle, Whitehall Review, Bolton Chronicle, Harrogate Herald, Hastings Observer, Cork Constitution, East London Observer, Local Government Chronicle, Birmingham Morning News, Metropolitan, Surrey Advertiser, Leeds Mercury, Halifax Guardian, Record, and *Brighton Guardian* have been received.

METEOROLOGICAL READINGS

(Taken daily at 8 a.m. by Steward's Instruments.)

THE LANCET OFFICE, MAY 25TH, 1876.

Date.	Barometer reduced to Sea Level, and 32° F.	Direction of Wind.	Wet Bulb.	Dry Bulb	Solar Radiation in Vacuo	Max. Temp. Shade	Min. Temp.	Rainfall.	Remarks at 8 A.M.
May 19	30·29	E.	46	51	98	66	44	...	Cloudy
„ 20	30·32	N.E.	46	52	98	68	40	...	Hazy
„ 21	30·12	S.W.	50	57	98	72	45	...	Hazy
„ 22	29·88	W.	51	58	93	63	45	...	Overcast
„ 23	29·79	N.W.	52	60	94	61	50	0·20	Cloudy
„ 24	29·72	S.W.	48	54	72	56	46	...	Cloudy
„ 25	29·77	N.E.	47	48	...	...	47	0·45	Raining

Medical Diary for the ensuing Week.

Monday, May 29.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.—Operations, 10½ A.M. each day, and at the same hour.
ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1½ P.M. each day, and at the same hour.
ST. MARK'S HOSPITAL.—Operations, 9 A.M. and 2 P.M.
METROPOLITAN FREE HOSPITAL.—Operations, 2 P.M.

Tuesday, May 30.

GUY'S HOSPITAL.—Operations, 1½ P.M., and on Friday at the same hour.
WESTMINSTER HOSPITAL.—Operations, 2 P.M.
NATIONAL ORTHOPÆDIC HOSPITAL.—Operations, 2 P.M.
WEST LONDON HOSPITAL.—Operations, 3 P.M.
ROYAL INSTITUTION.—3 P.M. Prof. W. G. Adams, "On some of Wheatstone's Discoveries and Inventions."

Wednesday, May 31.

MIDDLESEX HOSPITAL.—Operations, 1 P.M.
ST. MARY'S HOSPITAL.—Operations, 1½ P.M.
ST. BARTHOLOMEW'S HOSPITAL.—Operations, 1½ P.M., and on Saturday at the same hour.
ST. THOMAS'S HOSPITAL.—Operations, 1½ P.M., and on Saturday at the same hour.
KING'S COLLEGE HOSPITAL.—Operations, 2 P.M., and on Saturday at 1½ P.M.
GREAT NORTHERN HOSPITAL.—Operations, 2 P.M.
UNIVERSITY COLLEGE HOSPITAL.—Operations, 2 P.M., and on Saturday at the same hour.
LONDON HOSPITAL.—Operations, 2 P.M.
SAMARITAN FREE HOSPITAL FOR WOMEN AND CHILDREN.—Operations, 2½ P.M.

Thursday, June 1.

ST. GEORGE'S HOSPITAL.—Operations, 1 P.M.
ROYAL ORTHOPÆDIC HOSPITAL.—Operations, 2 P.M.
CENTRAL LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M., and on Friday at the same hour.
ROYAL INSTITUTION.—3 P.M. Prof. Tyndall, "On Voltaic Electricity."

Friday, June 2.

ST. GEORGE'S HOSPITAL.—Ophthalmic Operations, 1½ P.M.
ROYAL SOUTH LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M.
ROYAL INSTITUTION. — 6 P.M. Weekly Meeting. — 9 P.M. Prof. Roscoe: "Recent Discoveries about Vanadium."

Saturday, June 3.

ROYAL FREE HOSPITAL.—Operations, 2 P.M.
CHARING-CROSS HOSPITAL.—Operations, 2 P.M.
ROYAL INSTITUTION. — 3 P.M. Prof. Morley, "On King Arthur's Place in English Literature."

NOTICE.

In consequence of THE LANCET being frequently detained by the Post Office when posted for places abroad *more than eight days after* publication, subscribers and others are reminded that such copies can be forwarded only as book packets, and *prepaid* as such.

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